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ORGANIZING FOR EDUCATIONAL CHANGE

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**ORGANIZING NEW YORK STATE
FOR EDUCATIONAL CHANGE**

ED002714

A study of the dynamics of instructional change in the
elementary and secondary schools of New York State
with recommendations for improved organization.

by

Henry M. Brickell

Consultant on Educational Experimentation
to the Commissioner of Education

under a grant made by

the Fund for the Advancement of Education
of the Ford Foundation
to the University of the State of New York
State Education Department
Albany

December, 1961

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Additional copies of this report are available from the Commissioner of Education, State Education Department, Albany, New York.

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Also available are copies of the companion report, *COMMISSIONER'S 1961 CATALOG OF EDUCATIONAL CHANGE*, a survey of changing instructional approaches and descriptions of new programs in the public and non-public elementary and secondary schools of New York State.



Acknowledgment . . .

I want to thank the men of New York State who made this study possible by opening the doors of the local school systems including New York City, the State Education Department, the schools of education and medicine and agriculture in the colleges and universities, the college-affiliated school study councils, and lay and professional associations and organizations of every kind.

Almost all of the ideas in this report came from the many individuals, including hundreds of classroom teachers, who answered my questions thoughtfully and honestly. This document is largely a report of my conversations with them. Because most of the information here was new to me, my debt to them is great.

Commissioner of Education James E. Allen, Jr., gave me steady encouragement and complete freedom to conduct the study in whatever way seemed best. He authorized in advance the publication and wide distribution of whatever report resulted.

So many members of the State Education Department shared their ideas and offered their advice that I hesitate to name any individual for fear of omitting others who were equally helpful. However, I am especially grateful for the advice of Executive Assistant Allen P. Bradley, for the active encouragement of Associate Commissioner Walter Crewson, and for the repeated

assistance of Associate Commissioner Lorne H. Woollatt. I am also indebted to the entire staff of the Quality Measurement Project and especially to William D. Firman, who chaired the Department committee which first studied the possibilities of a State-sponsored experimental education center. This list stops short of naming many other members of the Department who contributed extraordinarily helpful ideas.

A generous grant made to the New York State Education Department by the Fund for the Advancement of Education of the Ford Foundation enabled the Department to sponsor this study. Lester W. Nelson and Edward J. Meade, Jr., of the Fund stood ready to offer assistance whenever it was needed.

The Manhasset Board of Education and Superintendent Raymond L. Collins granted me a six-month leave of absence from my responsibilities as Assistant Superintendent, for which I am deeply grateful. They also enabled me to take many days from my regular duties in Manhasset in the fall of 1961 so that I could write the report and discuss it with people all across the State.

A study of this kind is demanding not only of the man who conducts it, but also of his family. My wife, Mary Daly Brickell, provided constant support and rendered invaluable help in every phase of this undertaking.

Pauline Collins of Manhasset assisted me by a critical reading of the manuscript.

Finally, to Agnes S. Burton, who master-minded the myriad details of my itinerary and ably managed my Manhasset office during my absence, I express my lasting appreciation.

HENRY M. BRICKELL

Manhasset, New York
December, 1961

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JAMES E. ALLEN, JR.
Commissioner of Education



Foreword . . .

At the September, 1960, meeting of the New York State Council of City and Village Superintendents, I discussed the importance of educational experimentation and change and suggested that there was a need for statewide action to aid in the invention of better instructional programs, to provide for their thorough evaluation and to speed their spread through the schools.

Following that meeting, I appointed Henry M. Brickell, Assistant Superintendent of Schools in Manhasset, New York, as my Temporary Consultant on Educational Experimentation. Dr. Brickell was asked to make a study of educational experimentation in the State and to recommend a plan for action. Funds for the support of this project were obtained through a grant from the Ford Foundation's Fund for the Advancement of Education.

His work resulted in two reports: (1) this document, describing what he learned in his visits to schools, colleges, the State Education Department and associations and agencies of all kinds, and presenting his recommendations; and (2) the *Commissioner's 1961 Catalog of Educational Change*, an inventory of new instructional programs now in use in the schools of New York State.

In the pages which follow, Dr. Brickell outlines a plan for State organization which he believes would correct the conditions he identifies as blocking faster educational change today. The plan would allocate definite responsibility for educational research and development between State and local government and among the various organizations which shape elementary and secondary school programs. Specifically, it calls for State financial support of special projects for the design and the subsequent field testing of new instructional approaches. These projects would be located in the schools and colleges and staffed by

school and college personnel. At the local level the plan calls for regional groupings of school systems, well financed through local sources, to engage actively in the dissemination of proven programs.

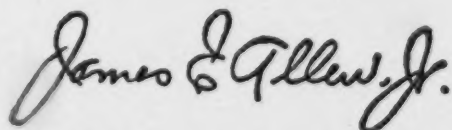
I look upon this project as one of the most significant ever sponsored by the Department. If we are to achieve the goals we hold for our children, the schools of New York State must apply the utmost ingenuity, imagination and flexibility in the use of personnel, resources and facilities. Many of the established concepts and traditional techniques which characterize our schools today will have to be replaced by new ones designed to increase efficiency and improve quality.

New York State has been a leader in striving to improve its schools. Able and distinguished members of the State Education Department, and teachers and administrators throughout the State, have been in the forefront of this effort with many creative and effective projects and programs. But we all recognize that more needs to be done and that the pace of educational change must be quickened.

At the same time schools must be helped to develop a greater sense of certainty that the changes which they make will result in significant improvements. Indeed, one cause of slowness in educational change is the lack of certainty that a new instructional approach will be better than the one which it replaces. As instructional programs are more adequately evaluated, the rate at which they are accepted and used will be accelerated. If New York State can define new and more effective ways of shortening the gap between innovation and practice in education and of expediting generally the process of educational improvement, I am confident the result will have nationwide impact.

Dr. Brickell has brought insight, imagination and skill to the task assigned to him. On behalf of the State Education Department I express our thanks to him and to the many individuals who cooperated in his study.

I strongly urge the reading of this report by all persons interested in the advancement of education in our State. My colleagues in the Department and I await public and professional reaction with deep interest.



JAMES E. ALLEN, JR.
Commissioner of Education

Why and How the Study Was Made . . .



"All across America experiments with new concepts and practices are beginning to show significant results in the improvement of quality. New York State has taken the lead in this movement at both the State and local levels . . . These efforts, however, are not enough. We need to consider how best to bring to bear the total educational resources of the State in a massive attack on resistance, lethargy and blocks to constructive change." * Commissioner of Education James E. Allen, Jr. made this statement to the Board of Regents in August of 1961.

The Problem of Change in New York State

New York is unquestionably a leader among the states in speed and quality of educational change. Much evidence is already at hand to indicate that it is probably in the first position. For example, in 1960 New York led all other states in the number of pupils taking Advanced Placement Program examinations — a full 25% of the national total. If more evidence of alertness to new instructional possibilities were to be gathered, most of it would be likely to show New York's superiority.

And yet Commissioner Allen describes the pace of instructional change in the schools of New York State as being too slow. In what sense is the pace of change too slow? Has any other state done better? Probably not. Probably no other state has done as well. But other states are not the criterion.

When Commissioner Allen says: "New York State has taken the lead . . . These efforts, however, are not enough," he is not measuring New York against the other states. He is setting the goal at a level higher than any other state has yet achieved. He is using as the criterion: *What New York State could become.*

In the sense that the State is less than it could become — less than it *should* become — there is a problem.

* *Goals and Plans for Education in New York State*, Memorandum to the Boards of Regents, August 1961, p. 15.

The Purpose of the Study

At the beginning of this study, the Commissioner described in these words what he wanted it to produce: "Specific recommendations for statewide action to achieve the following purposes: (1) evaluating new practices and devices; (2) initiating and expanding constructive experimentation in the schools; and (3) facilitating and accelerating widespread use of practices and devices which have been proved or may be proved successful in the schools of New York State and elsewhere."

He expressed his special interest in programs which seek to make better use of time, professional talent, physical facilities, and other resources in the improvement of learning. Among the many specific programs he wished studied were the use of television, team teaching, large and small group instruction, ungraded classes and teaching machines. These programs were of moment not because any conclusion had been reached as to their value, but because they all require some rearrangement in the way blocks of time are organized, in the way teachers work with students, in the allocation of physical facilities, and in the use of instructional equipment and materials.

The Commissioner emphasized at the outset that he had no interest whatever in change for the sake of change.

He also emphasized that the recommended plan should in no way diminish local control of education.

Two Major Limitations of the Study

One significant limitation of the study is the fact that it did not investigate *classroom practice* — the behavior the teacher is usually free to exhibit in his own classroom with his own pupils. Consequently the conclusions presented here, and the recommendations for improved statewide organization based on those conclusions, may not fit the circumstances which shape the invention, testing and spreading of classroom practices among teachers.

Another limitation is the fact that organizations and agencies such as colleges and universities were examined and judged largely in terms of their impact on instructional innovation in

local public school systems. The other functions of those organizations were not studied.

The Conduct of the Study

The first problem in launching the study was to select the schools which would be visited. They were to be visited only to discover how they made decisions about instructional change, not to observe or to assess their new programs.

The Quality Measurement Project in the State Education Department has collected over the past several years elaborate data for a sample of 100 public school systems representing the total range of types and sizes in New York State. The staff of the Project suggested a variety of school systems from across that entire range as possible places to visit. From that list, the Consultant selected New York City and 30 additional public school systems.

Active, well-financed suburban school systems were chosen somewhat more often than other types because it seemed important to study closely those conditions which are most conducive to rapid educational change, according to previous research into community types. The fact that such school systems were generously represented in the survey gives a special urgency to the conclusions in this report. If the conditions which affect change even in well-supported, suburban schools are as described here, then in other school systems not so richly endowed with resources the pace of change is presumably even slower, the direction even less certain.

School systems outside New York City were visited for an average of nine hours each. The typical day included extended conversations with the administrative staff, short conversations with a sampling of the teachers engaged in new instructional programs, and brief visits to classrooms at all grade levels in all kinds of buildings. In the 30 New York State school systems outside of New York City, approximately 100 schools and 1500 classrooms were visited long enough to get an overall impression of the kind of educational program, the kind of teaching personnel, and the kind of physical facilities characterizing the school system.

In the New York City public schools, approximately seven days were devoted to visiting. Virtually all of the interviews were with persons in administrative positions. Actual observations were made in only a scattering of individual classrooms. The extensive literature which New York City has published describing its educational programs was examined in some detail.

Thirteen colleges and universities were visited. Three out of the eleven State University Colleges and most of the major teacher preparation programs in private institutions were included, along with the teacher education programs in two typical smaller colleges. College interviews were limited to the faculties of the schools and departments of education, except for occasional conversations with professors whose chief responsibility lay in another school or department.

The Commissioner of Education, his immediate associates, and a very broad sampling of personnel at other levels in the State Education Department were interviewed.

Other activities involved visits to colleges and schools of medicine and to various professional associations and citizens organizations, as well as attendance at a number of professional conferences and conventions at which the Consultant discussed problems of educational change with individuals and with interested groups. Finally, there were interviews with selected individuals in education and in other fields who were in a position to throw light upon the problems under investigation.

A list of the institutions, organizations, associations and individuals visited appears in the Appendix.

The professional staff of the project consisted of the Consultant himself. The entire study extended from February 1 through July 31, 1961, during which the Commissioner's 1961 Inventory of Educational Change was also conducted. August and September were used exclusively for writing the two major reports.

The Outcome of the Study

Beginning with the Commissioner's statement that the status of instructional change in New York State *is a problem*, this study then *inevitably* went on to locate specific defects in many

of the structural arrangements used to promote change and to discover general shortcomings in the ability of the schools to undertake change.

The findings appear in Section I — *The Problem: The Dynamics of Educational Change Today*.

The recommendations appear in Section II — *The Solution: Organizing to Improve the Process of Educational Change*.





THE PROBLEM . . . The Dynamics of
Educational Change Today



New York State is a massive, complex entity. At the elementary and secondary levels, there are 880 operating public school systems (including New York City, which enrolls about 35% of all public school students) and 335 non-public secondary schools (including all private and parochial institutions at that level) as well as a large number of non-public elementary schools. In addition, there are 189 institutions of higher learning.

New York has a large, influential State Education Department, nine active regional college-affiliated school study councils and one statewide council, an energetic State Teachers Association, a strong State School Boards Association, a well-supported Parent-Teachers Association, and a vigorous Citizens Committee for the Public Schools. The schools of the State are also affected by the activities of private philanthropic foundations, commercial organizations, taxpayers' groups, newspapers and local citizens committees.

Any study which sets out to describe the dynamic relationships of all the forces which shape elementary and secondary school programs in the State is doomed to oversimplification and threatened with error. The statements made here about the dynamics of instructional change consist largely of sweeping generalizations. The reader can point to major exceptions; so can the writer. Both must exercise the discipline of omitting those exceptions from the discussion in order to illumine the major vectors which determine the speed and direction of the educational change process.

Consequently, the task for the reader in this section is the same as it was for the writer: to test each statement not to see whether it describes every individual case which can be called to mind, but whether it is instead a fair summary of the general condition in New York State.

Any discussion of the dynamics of change should be prefaced by a look at the changes which are actually taking place.

The Pace and Direction of Educational Change Statewide—1953-1960

In the spring of 1961, Commissioner of Education James E. Allen, Jr., sponsored the taking of a statewide inventory of

changing instructional approaches in the public and non-public elementary and secondary schools of New York State. A total of 2657 new instructional programs begun between 1953 and 1960 by 486 (55%) of the public school systems was analyzed to find what changes schools had made — and to find *when* they had made them. A total of 249 new programs begun during the same period by 104 (30%) of the non-public schools was similarly analyzed.

In addition, those same public and non-public schools described approximately 1500 of their most promising new programs in some detail. Of this total, 296 were selected for publication.

The two major findings of that study are summarized below. A detailed treatment appears in the *Commissioner's 1961 Catalog of Educational Change*, available on request from the State Education Department, Albany, New York.

Sputnik I Stimulates a Dramatic Shift in the Pace and Direction of Change

The rate of instructional innovation in New York State public elementary and secondary schools *more than doubled within 15 months* after the firing of the Soviet Sputnik I on October 4, 1957. Changes swept not only foreign languages, mathematics and science — which led the field by tripling their rate of change — but all other subjects, *non-academic as well as academic*.

A similar response by the non-public schools was not evident from the data collected in the survey.

Most of the attention to public schools resulted in new programs for above average students in the junior and senior high schools.

Schools as Structured Institutions Remain Stable

In launching the statewide inventory, Commissioner Allen had voiced his interest in innovations which made better use of time, professional talent, physical facilities and other resources. The study revealed that despite the number of new programs introduced, most of the accompanying changes took place *within* the existing structural framework of the schools. Schools had

tended to adopt new textbooks, alter the content of some traditional courses, add honors sections in some subjects, change the way they selected students for instructional groups, and accelerate the pace at which bright students moved through a standard sequence of courses. Few innovations embodied changes in the kind of people employed, in the way they were organized to work together, in the types of instructional materials they used, or in the times and places at which they taught. In short, *schools as structured institutions had remained stable.*

The Process of Change Within Local Schools

A school is a social institution in which someone teaches something to someone else with a method at a time in a place. The six *major structural elements of the institution* are: teachers, subjects, students, methods, times, places. This study focused exclusively on programs which require *significant shifts in the normal arrangement of those institutional elements.*

It might be helpful to begin with a general formulation which the Consultant offers as a possible explanation for the roles played by the public, the board of education, the administrators, and the teachers in the dynamics of instructional innovation.

A school, like any other institution, tends to continue doing what it was established to do, holding itself relatively stable and resisting attempts at restructuring. There is a sound reason for this: Stability in the institutional structure makes for maximum output of the results that structure was designed to produce. Any change in the arrangement of its elements tends to cut down production, at least until new habit patterns are formed.

There are two distinct groups of people who might be expected to influence structural change in the local public schools: the public, which is external to the institution, and the profession, which is internal to it. The process of local educational change is determined by the relationships of these two groups: the public and the board of education as external, the administrators and the teachers as internal.

Calls for distinctly different educational results tend to come from outside the school itself, that is, from the public and the board which represents that public.

When the school is asked to produce a different kind or a different quality of education, some rearrangement of its institutional elements may be in order. One of the tasks of a chief administrator — such as a superintendent of schools — is to take external demands for different results and translate them when necessary into new patterns for organizing the elements of the institution (or for changing the elements).

Like the teachers, the administrator has a stake in maintaining stability so that traditional results can be produced. He also must be particularly responsive to demands for new kinds of results. Schools are usually structured so that the chief administrator can be kept responsive to external demands: The superintendent serves in a contract relationship to a lay board of education.

Even before new demands are expressed locally, an administrator who sees nearby schools like his own making structural changes may anticipate the local pressures which are to come and move in advance to meet them.

The Role of the Public, the Board, the Administrator and the Teacher

Parents and citizens groups in most communities do not exert a direct influence on the adoption of new types of instructional programs, but their influence is decisive when exerted. Implication: In disseminating new programs, it is not necessary to arouse the active enthusiasm of local parents, but it is necessary to avoid their active opposition.

Most parents do not know enough about educational methodology to favor or to oppose specific innovations. Parents and the public seem to exert their influence by creating a general climate of interest — or the lack of it — in school affairs rather than by singling out and endorsing particular approaches used in other school systems. However, if for some reason the public develops a lively interest in a new type of program — foreign languages in the elementary school, for example — that program is likely to appear in the local classrooms. In the same way, if parents

decide to oppose a new program for any reason, it is difficult if not impossible to make it succeed.

In a few alert communities, parents and citizens avidly follow developments in neighboring schools and occasionally urge the local schools to adopt new programs which they believe would be desirable. That degree of active community interest in specific instructional innovations is, however, rare.

What about public reluctance to support better programs — is it a factor inhibiting professional staffs eager for change? Not according to the information gathered in this study, which clearly indicated that community expectations and professional ambitions are usually in reasonable harmony with each other. Communities which expect little of schools and are unwilling or unable to pay for quality programs tend to attract and to retain teachers and administrators who are willing to work in that environment.

Taking the State as a whole, what this means is that severe dislocations between the hopes of the profession and the expectations of the community are rare. The essential similarity in viewpoint between the staff and the public is probably the reason parents and citizens do not constitute a *distinctive, separate* influence on instructional innovation. Their wishes evidently have already been absorbed into the schools. In fact, as suggested earlier, one function of the administrator is to see to that very absorption.

The board of education in most communities is not a strong agent in determining the path of educational innovation, but its influence is decisive when exerted. Implication: New programs must be disseminated in a manner which will not arouse the opposition of boards of education.

The role played by the board of education is much like that of the general public. While the board and ultimately the public are important sources of *demands for improved outcomes*, the board like the public rarely *demands specific instructional innovations*. That is, while it may ask that the mathematics program be updated for the space age, it is unlikely to select new content or methods for the mathematics curriculum.

Most board members, like most citizens who have not specialized in education, do not know enough about instructional methods to suggest that any given new technique be either adopted or rejected. Many board members are only vaguely aware of new instructional developments because they devote their time to other matters. Consequently, a local decision to adopt a new teaching approach ordinarily is not subject to strong influence by the board.

Naturally, if the board for some reason decides either to urge or to oppose the adoption of a particular innovation, it will ultimately work its will upon the schools. For this reason staff members who are eager to introduce an innovation usually take care to see that the board is at least willing to see the change made.

In certain types of communities board members learn about innovations in other school districts through reading newspapers, attending meetings, and talking with their own professional staff. A board which takes an interest in innovation creates a situation in which the staff must at least explain why new approaches have *not* been adopted. From time to time a board goes even further, usually in communities of very high socio-economic level, and virtually mandates the use of a specific new approach. But it is rare to find a board directing the instructional program to that degree.

Just as with community aspirations and professional ambitions, the viewpoint of the board of education and the viewpoint of the superintendent are ordinarily in harmony. Probably because of that harmony, the board is not visible as a *separate* influence on instructional innovation. The superintendent evidently represents the wishes of the board adequately.

New types of instructional programs are introduced by administrators. Contrary to general opinion, teachers are not change agents for instructional innovations of major scope. Implication: To disseminate new types of instructional programs, it will be necessary to convince administrators of their value.

The statement above is made not about classroom practice, but about new types of instructional programs which usually touch several teachers and which may require breaking up old work patterns.

Instructional changes which call for significant new ways of using professional talent, drawing upon instructional resources, allocating physical facilities, scheduling instructional time or altering physical space — *rearrangements of the structural elements of the institution* — depend almost exclusively upon administrative initiative. Even in the best of circumstances for the expression of new ideas — in schools where administrative authority is exercised with a light hand and faculty prerogative is strong — teachers seldom suggest distinctly new types of working patterns for themselves.

To understand this, it must be remembered that the teacher is not an independent professional, not a private entrepreneur free to alter his working situation when he chooses — not free to decide what he will teach to whom at what time and at what price. He is instead a member of the staff of a stable institution.

His behavior reflects his position. So long as he remains inside his classroom he exerts almost total control. The moment he steps outside it, however, as proposing a new type of instructional program would require him to do, he comes face to face with a group of his peers. Any semblance of control evaporates; he has no more authority than other members of the group, some of whom will not welcome his proposals.

The complexity of group decision-making and the difficulty of a peer group's choosing among several attractive possibilities (or, more exactly, possibilities with different degrees of attractiveness for each member) are well known. The value of leadership and the uses of authority in such a situation are also well known. An administrator is powerful because he can marshal the necessary authority — if not the necessary leadership — to precipitate a decision.

The language which has been developed to describe school administration, a language used almost universally by practicing administrators as well as by college professors in the field of administration, is not descriptive of the actual process. Phrases like "democratic administration," "the team approach," "shared decision-making," and "staff involvement" are common-

place. Behavior to match them is rare. The phrases themselves are often used with the intention of hiding the great strength of administrative action.

The participation patterns in widespread use are very often little more than enabling arrangements, organized after an administrator has decided the general direction (and in some cases the actual details) of an instructional change. Committee studies, visiting other schools, bringing in consultants, sampling available instructional materials and similar activities are frequently employed simply to persuade the faculty to embark in a direction which has been at least partly pre-selected.

His subtle leadership — or undercover direction — is thought by the practicing administrator to be most successful when he can say at the end: "They think they thought of it themselves."

In summary, authority is a critical element in the shaping of institutional decisions. Schools depend heavily upon administrative authority in decision-making. Consequently, the control center of the institution, as schools are managed today, is the administrator. He may not be — and frequently is not — the *original source of interest in a new type of program*, but unless he gives it his attention and actively promotes its use, it will not come into being.

Classroom teachers can make only three types of instructional change in the absence of administrative initiative: (1) change in classroom practice, (2) relocation of existing curriculum content, and (3) introduction of single special courses at the high school level. Implications: (1) Classroom teachers cannot be expected to introduce new types of instructional programs without administrative attention and (2) In-service courses designed for individual teachers rather than for entire departments or faculties (that is, courses designed to improve the teacher rather than to change the program) should be limited to matters which can be accomplished in one of the three ways indicated above.

There appear to be three types of change which are within the effective control of classroom teachers. Simple willingness on the part of administrators seems to be sufficient to enable the following to take place:

- (1) ***Change in classroom practice*** — that is, any alteration in instructional procedure which a teacher can accomplish in his own classroom without disturbing or dislocating the work of other teachers. The teacher exerts almost complete control over his own classroom work. In fact, the administrator very often does not know what the teacher is doing from day to day.
- (2) ***Relocation of existing curriculum content*** — an activity which a group of teachers commonly initiate and can carry forward relatively unassisted so long as there is no administrative opposition. A typical example would be the relocating of arithmetic topics between the 4th and 5th grades to assure proper dovetailing. Teachers quickly sense that a sequence is out of joint and are usually eager to set it straight.
- (3) ***Introduction of single special courses at the high school level*** — these are commonly terminal courses in a sequence. They are often begun at the initiative of a teacher who has just returned from an intensive learning experience, as during a sabbatical year or in a summer institute. The teacher may urge the administrator to schedule a course for bright students so that they can share what the teacher himself has just learned. Administrative permission is usually enough; the teacher's own drive and enthusiasm will bring the course to life. Incidentally, this particular adaptation is like a classroom practice in that it has but little effect on the work of other teachers.

A teacher who returns to his school with new information and new teaching skills is most likely to use them if he can employ them in his own classroom without disturbing the work of other teachers. If his new information and skills demand the creation of a new course for their full realization, he is most likely to get administrative permission for a course at the end of a sequence which will cause least disturbance to the work of other teachers.

It follows, then, that college courses, summer institutes, winter workshops, and other in-service experiences offered to *individual volunteers* will be most effective when they teach informa-

tion and skills which teachers can take home and use *without disturbing the work of others*. It also follows that the use of voluntary courses to teach individual teachers such skills as how to produce television programs or how to act as leaders of teaching teams will not be as effective because these skills require *administrative intervention to modify the local school program before they can be employed*.

Deciding to Change

Few new instructional programs are invented in any local school system. Most local changes involve a shift to a type of program which is in use elsewhere, although the program may of course be modified and adapted to local conditions. The decision to change to a different type of program is conditioned by a series of highly significant factors.

Professional suspicion about the value of innovations in other school systems, and even about the sincerity of other innovators, is a widespread and serious inhibitor of educational change. Suspicion is an inevitable concomitant of efforts to disseminate new programs and is created in part by those very efforts. Implication: Recommended new programs must be disseminated in a way which will allow the practitioner to quell his own suspicions.

There is a strong disposition among administrators and teachers to suspect that many of the new programs which come to their attention are of little educational consequence — froth without substance — and may have been concocted by the sponsoring school largely in an effort to gain outside recognition. Suspect programs are usually thought to be “harmless for children” but lacking in any real advantage over current practice. If the new development is being actively advertised — by either educational or commercial organizations — additional suspicion is aroused. (The driving force behind the innovation is sometimes thought to be an administrator eager for a quick reputation and perhaps a better job.)

Many visits are undertaken *for the purpose of discovering that the new program in a neighboring school is no better* — and

perchance a trifle worse — than what the home school is already doing. Such a discovery is deeply satisfying. It means that the local program to which administrators and teachers have devoted their daily labor is superior to an outside program which is being hailed as “advanced.” Thus it is not necessary to change the local program. More important, it has now become clear that *local children have been well served all along*. For a profession in which the feeling of rendering worthy service is a basic form of compensation, the latter finding is understandably gratifying.

Incidentally, the innovations which were visited and observed by the Consultant during the survey seemed to be uniformly honest efforts to educate children better. The new departures seemed to be accompanied but not dictated by a normal human desire for recognition. It is true, however, that the sponsors rarely knew for a certainty whether the novel approach actually improved learning.

The most persuasive experience a school person can have is to visit a successful new program and to observe it in action. Speeches, literature, research reports and conversations with participants outside the actual instructional setting are interesting but relatively unconvincing. Implication: Recommended new programs must be demonstrated so that they can be observed in action.

The Consultant asked hundreds of teachers and administrators, “What does it take to persuade you to adopt a program being used in another school? What would make you feel the program might be worth a try?”

Their answers were remarkably uniform. Here are the opinions, *not of the Consultant*, but of most of the teachers and administrators interviewed. Their remarks are paraphrased but faithful to the spirit of the original:

Speeches at professional meetings — The speaker is in the spotlight; he is representing not only himself but also his school. Everything he says will be carefully noted and may be widely repeated. He reacts by choosing his words so that he accentuates the positive and glosses over the negative. In his effort to gain

recognition for himself and his school, he is likely to label his new program an unqualified success.

This kind of behavior is forced upon him by the situation itself, even if he is normally honest. In fact, the same person who tells only one side of his story while he is in the spotlight will freely admit the defects in the new program the moment he leaves the stage and starts talking informally with a few friends.

What all of this means is that the truth about innovations is not available from the platform.

Articles in professional journals — The man writing for a journal faces the same situation as the speaker at a meeting — and he reacts in the same way. He has an almost irresistible inclination to minimize the shortcomings of his own work. As they are reported in the journals, almost all educational experiments are a success. For that reason a magazine article is no more dependable than a speech.

Research reports — Education is difficult to measure. Research reports are usually uncertain in their conclusions, as most of them bend over backward to point out. As a matter of fact, research findings are often in conflict with each other. But even if a research study contains definite findings which agree with findings in earlier research, it has to be remembered that it is possible to do almost anything with statistics.

Conversations with participants outside the actual instructional setting — These can be quite useful, particularly if the person describing the program is a personal friend who can be trusted to give an honest description of it. However, there are many elements of a teaching situation which cannot be communicated by any sort of description. Even a conversation with a friend is no substitute for the actual observation of a program in action.

Observation of the program in action — The only way to judge a new program is to visit it. Of course the description given by the superintendent in his office or by the principal in his office cannot be taken at face value. It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is very helpful. A talk with the students themselves can be even more revealing.

Anything abnormal, unreal, or artificial in the circumstances surrounding an observed program — that is to say, anything appreciably different from conditions in the visitor's own school system — can rob a visit of persuasive effect. Implication: Recommended new programs must be demonstrated in schools quite similar to those from which visitors come.

The observer is extremely sensitive to any distinctive characteristics of the host school or community which might explain the apparent success of its new program. If the characteristics are unlike those of his own school, he is alert to the possibility that those very differences may explain the success of the program in its present location.

An essential purpose of the visit is to enable the observer to compare conditions in the two schools. He is especially wary of variations in mental ability of pupils, financial support of the program, physical facilities, make-up of the community, and characteristics of teachers.

If the observer finds that the conditions are abnormal, unreal, or artificial — that is, *different from his own* — he is likely to conclude either that the program cannot be duplicated in his own schools or that if duplicated it might fail. For this reason, people from a rural school district have little interest in visiting new programs in a large city; people in an industrial town have little interest in visiting a wealthy suburb; and so on. Although some people find value in observing programs in schools unlike their own, even they usually point out that it is much easier to imagine how the program might work at home if they have seen it under home-like circumstances.

In keeping with this viewpoint, people all across the State flatly rejected the idea of a centrally located, State-sponsored experimental education center for the demonstration of novel programs. Such a center, they believed, would provide an extremely artificial setting in which specially selected teachers and specially selected students, equipped with superior equipment and materials, would perform under extraordinary conditions. The motive behind the creation of such an experimental center was widely acclaimed, but the structure itself was rejected.

Similarly, and with equal vigor, almost everyone rejected the campus schools at the eleven State University Colleges as sites for the demonstration of innovations. They saw in the campus school a setting so different from their own that they could learn little from observing it. The campus schools are generally believed to have, by virtue of their State financing, a freedom from public control which sets them apart from public schools. The fact that they are located on college campuses and filled with student observers is also thought to make them distinctive. Finally, they are almost universally believed to have an extraordinarily capable student body drawn largely from favored homes. Their independence, their location, and the character of their students render them powerless to persuade the practitioner.

Introducing the Change

Once the decision to change has been made, the actual introduction of the new program gets under way. This is a complex process, conditioned in part by the way the decision was reached. Here are the Consultant's observations concerning it:

New instructional programs can be successfully introduced despite initial apathy or even opposition on the part of a number of teachers. Implication: It is not necessary to wait until faculty opinion is unanimous before making a change in instructional pattern.

Faculty members ordinarily begin to prefer new methods within four months to a year after a novel program has been introduced, regardless of their very early reactions. There is usually an initial period during which the staff reserves judgment, but doubt diminishes with experience and many programs are being enthusiastically endorsed in a matter of months.

If new programs are generally preferred to old ones within a short period of time, something uniform must take place during the early months of most innovations to cause their acceptance. It seems reasonable to believe that what happens is simply this: teachers learn how to do the new job; they then feel competent and secure.

It became evident during the survey interviews that proposed innovations arouse feelings of insecurity and inadequacy in

many teachers. The more radical the change in content or method, the more likely teachers are to feel inadequate.

Feelings of inadequacy and doubt should be distinguished from outright resistance to change. The early questions, doubts, and hesitations teachers express when innovation is imminent should not automatically be labeled as *resistance*. Their feelings are more likely to be an anxious response to uncertainty, according to the information gathered during the survey interviews. Schools which were sensitive to those anxieties relieved them by providing teachers with information, reassurance, the promise of help — and direct experience in teaching the new program.

Teachers and administrators alike enjoy telling case histories of new programs which “began in the central office and ended before they reached the classrooms.” The customary moral of such stories is that teachers must share in making decisions if they are expected to carry them out, or else they will consciously or unconsciously “sabotage” those decisions. In his visits, the Consultant found countless situations in which teachers had not been taught how to handle a new approach; he found very few in which they continually attempted to sabotage a program *after it had been introduced*.

He concluded that more new programs have been destroyed by inability than by reluctance.

The Consultant was not able to identify either shared decision-making or *initial* teacher willingness as critical factors in the successful introduction of innovations. If we may judge by their daily behavior, most practicing administrators agree that neither shared decision-making nor initial willingness are critical factors.

The most successful innovations are those which are accompanied by the most elaborate help to teachers as they begin to provide the new instruction. Implication: Instructional innovation should be accompanied by substantial, continuing assistance to teachers.

It became vividly clear during the survey observations that *the key to successful innovation is assistance to the teachers*. The surest way to guarantee the successful introduction of a new pro-

gram is to supply teachers with all the help they need in moving into the new approach. Help can be given in the form of professional re-education (teaching the teacher necessary new content and new techniques) guided practice in the classroom (with expert advice at hand) plenty of instructional materials, active encouragement, and a chance to get ideas from other teachers who are learning the approach.

To return for a moment to earlier remarks about the decisive role of the administrator, it is obvious that he is in a position to supply — or to deny — the very kinds of help we are discussing here. Little wonder that he plays a decisive role.

Help need not be provided in advance of launching the new program. Advance help might serve to reduce anxiety but has been so seldom given that the Consultant could not find enough examples to judge its effect. On the other hand, there was some evidence that the greater the time lag between learning that a new program was to be introduced and actually beginning it, the greater the opportunity for teachers to become anxious. Perhaps if the preliminary period had been filled with help for teachers, anxiety would have been reduced. In any case, it was entirely evident that it is *not necessary* to provide help in advance.

Both professional literature and professional conversations about curriculum change are shot through with expressions of fear about the rigidity of written curriculum guides. The Consultant offers this observation based on six months of visiting schools: *The real source of rigidity in an educational program is not the written guide or textbook, but is the teacher who knows no more about the subject than is contained in that guide or book.* He is constricted by it in the sense that it is the limit of what he knows. It is his only map to an unknown land.

The Consultant had the rare opportunity of observing hundreds of teachers doing things they had never done before. It did not take long to discover that those who taught a new elementary mathematics or foreign language program with ease and flexibility were those who knew more math or language than the program called for. It was equally evident that those who followed written material with lock-step precision were those who had not been educated out beyond it.

Many of the newer instructional approaches now being introduced claim to bring greater flexibility to the teaching process.

If the potential contribution of these approaches is to be fully realized, teachers must be taught more than is strictly required to go through the motions of the novel approach. Otherwise many of them will be unable to do anything but use the new content and method in a slavish, mechanical fashion.

Evaluating the Change

Soon after an instructional innovation has been introduced, judgments begin to be made about its success. Regardless of the nature of the change or the type of school setting in which it is made, one particular evaluation procedure consistently overshadows all the others.

Instructional innovations are almost always evaluated by observing the reactions of the students while they are receiving the new instruction. In the eyes of the practitioner, no other evidence outweighs student reaction as a measure of success. More complex evaluative techniques are rarely used. Implications: (1) Local school systems cannot be expected to generate, on their own initiative, anything more than observational evidence of the value of their innovations. (2) Observers who visit demonstrations of recommended new programs should be given an opportunity to talk with students about their reactions to the new instruction.

Instructional procedures to which students react with interest or enthusiasm are ordinarily judged to be successful. Few programs are given a more intensive evaluation. Few school systems require anything more intensive before concluding that the new approach should be spread into other classes and other grades.

The direct observation of pupil responses is the primary method of assessing not only programs which are observed briefly in visits to other communities, but also in judging local programs which presumably could be subjected to a far more thorough analysis.

Even if the normal operation of the school produces pertinent information, such as scores on standardized achievement tests, Regents Examinations, or College Board examinations, the data are inspected with interest but are almost never regarded as

conclusive in and of themselves. For example, if achievement test results show little or no difference as a result of the new procedure (which is what they usually show) but students nevertheless respond to the instruction with interest or enthusiasm, the method is judged to be superior to what went before.

The degree of student enthusiasm, along with the opinion of the teacher, is used not only to determine whether the method is effective with students of a given type, but also to decide *whether the particular body of content and skill should be taught at a given grade level — or should be taught at all.*

What all of this means is that *pupil reaction is considered sufficient as a criterion of instructional success.*

Some people have suggested that pupil reaction is, after all, a superior criterion for measuring instructional innovation. What would be better, they ask? Indeed, what alternative is there? They point out that it would be a mistake to judge a new program by achievement tests when they measure a narrow strip of skill and knowledge whereas the program may have broad objectives. They say that long-range results, admittedly the best criterion, are too complex to measure and too distant to help with today's decisions.

Certain of these points could be argued. What cannot be argued, however, is the fact that when new instructional programs are invented, an adequate method of evaluating them is not invented simultaneously. A school using a new program thus has the choice of either measuring it with the wrong yardsticks or else making a rough subjective estimate of its value by observing pupil response. Neither alternative is adequate for a statewide program of accelerated instructional change. Something better will have to be designed.

Instructional innovations usually seem to the people using them to be distinctly better than what they were doing before. Implication: The reactions of users cannot be relied upon as the sole method of evaluating novel approaches.

Teachers and administrators involved in new instructional efforts almost always express praise for the results. The Consultant found this to be true in the survey interviews as well as in some 1500 brief descriptions of promising programs sub-

mitted for the *Commissioner's 1961 Catalog of Educational Change*.

It would seem that almost everything new works better. In fact, regardless of whether a given approach had been adopted or abandoned, the change was usually reported as an improvement. It was possible to find two school systems which had, in effect, "traded" programs in that each one adopted a program which the other had discarded. Both were likely to report better results.

Some people are inclined to attribute this widely-recognized phenomenon to the excitement of breaking up old patterns and building up new ones. "Change is stimulating in itself — anything that gets you out of a rut helps you do a better job," they say.

Others seem to believe that by participating in the decision to adopt a new approach, the staff builds up a commitment to it, a determination to make it a success. "Our staff worked hard to get this new program started — naturally they want it to work," people explain. (The widespread use of participation machinery springs to mind here.)

Without denying the stimulating effect of change in and of itself or the importance of a determination to make something work, the Consultant identified another factor which seemed to be even more powerful. It is reported below.

The attention, encouragement and recognition given to teachers by people outside the classroom during the introduction of new programs are among the strongest causes of their success. Implication: In evaluating new programs, attention, encouragement and recognition should be supplied equally to both the experimental and the comparison settings.

When a school program is changed, people outside the classroom begin to watch it closely. The principal may observe classes more often ("innovations are almost always evaluated by observing the reactions of the students"); he may send in visitors from other schools; a specialist may come in to give additional tests; the teacher may be given free time to study or prepare to use the new techniques, permitted to visit other schools, or encouraged to describe the program from public or professional platforms.

Classroom teachers normally work in such isolation that this kind of outside attention can scarcely fail to have an exhilarating effect. That attention predestines the success of many innovations. This may explain a point made above about the stimulating effect of change itself and about the value of a determination to succeed. Perhaps outside attention is what makes a change stimulating and perhaps outside recognition is what makes teachers determined to succeed.

In any case, simply paying attention to what teachers are doing apparently can improve their teaching. Almost any outside adult seems to exert a positive influence: the principal, another teacher on the same team, a research worker, a teacher's aide, a student teacher, or a parent. During the survey interviews administrators frequently shrugged off any unique value in the *specific form* of an innovation — team teaching, for example — and said, "It succeeded because it brought our teachers into real contact with each other for the first time."

In short, the "Hawthorne effect" — higher production stimulated by a change which does not alter the original resources — evidently goes hand in hand with educational innovation. The advantage of this kind of "overproduction" is that it tends to insure better results (at least temporarily) even from approaches which are inherently no better than those they replace. This means that children will be automatically protected from some of the possible negative effects of experimentation.

On the other hand, novel approaches cannot be assessed accurately *unless the comparison groups which use the old method can be supplied with the same ingredients which energize the new method*. This study indicates that these ingredients are the attention, encouragement, and recognition of people outside the classroom. *When these are supplied, "overproduction" should occur in both the comparison and experimental groups*. Then the differences in results, if any, can be attributed with more confidence to differences in the programs — rather than simply to the fact that something was changed.

The Role of Outside Institutions and Organizations

Local educational change is influenced by a number of outside agencies. Any plan for improved State organization to ac-

celerate the pace of change and to improve its direction must take these agencies into account. The more significant ones are described in the pages which follow. Here again, as in previous remarks, the Consultant uses broad generalizations. There are exceptions, but none important enough to override the main points.

The State Education Department

The State Education Department exerts a powerful influence on educational change in local schools. In some ways the Department is an active stimulus; in other ways it is a serious barrier. It soon became obvious during the survey that the elementary and secondary schools of New York State look to the Department for leadership and feel much more comfortable in making instructional innovations if the Department has endorsed them. Thus the posture of the Department toward innovation in general and toward innovations in particular is of great import.

Recent Department interest in instructional innovation has improved the climate for local educational change.

In recent years the State Education Department has taken a number of steps to promote instructional innovation. While most of these have called for changes within the existing structure of school organization, as by changing the subject content of single courses, there are some which demand restructuring. The use of television is an example. The Department's endorsement of television is generally known to the schools.

During the 1961-62 fiscal year the Department is investing over \$2,000,000 in a variety of efforts to stimulate the design and evaluation of new instructional methods and to improve the ability of teachers to use the best of the available techniques. Much of the money has gone into areas which have accelerated sharply in rate of change since 1957: the teaching of foreign languages, science and mathematics, and attention to gifted students. Although this might seem to indicate that dollar expenditures by the Department have led directly to the increase of local programs in those areas, it seems likely from the statistical and observational data gathered in this study that those

changes might have been accelerated even in the absence of specific State-financed programs. It would seem that both State and local action sprang from a common source: public concern about educational quality. Undoubtedly, however, one effect of the special Department expenditures has been that they have given a clear endorsement to new efforts in the areas subsidized. It is probable that *State endorsement has been at least as important as State financing* in clearing the way for local schools to respond to public demands.

Local schools recognize that the Commissioner and top-echelon officials want to promote innovation, but they feel the same spirit has not permeated the entire Department.

A great many of the people interviewed in local schools, particularly administrators disposed toward innovation, told the Consultant that they are well aware of the call of the Commissioner and his immediate associates for bolder new efforts. They often went on to say that they are seriously constrained in responding because many individuals in the Department to whom they must go for specific decisions are not inclined to encourage new approaches. Whatever the actual circumstances in the Department, there is no question but that this perception on the part of practicing administrators and teachers impedes instructional change. After all, it is the lower echelons of the Department which have the most frequent contact with local schools — by mail and in person. The field supervisor who visits the schools is “the Department” to a principal who meets no one else.

It is generally believed by people in the schools that encouragement for innovation increases at each higher level in the Department. Many people said that because they had been in the State for a number of years, or had worked in the Department, or were well known there, they were quick to appeal negative decisions to higher authority. One specific statement was made by superintendents and principals so often it bears quoting: “If you get up as far as Associate Commissioner Crewson or Commissioner Allen, they will listen sympathetically to almost any new idea.” The Consultant concluded that the young administrator, or the newcomer to the State, could be seriously inhibited by the Department until he discovered this pattern of “increasing affirmativeness.”

When the Consultant inquired about it within the Department, the existence of the pattern was confirmed. Apparently several forces work within a large organization to make saying "yes" a privilege reserved for the man above. This is a phenomenon which the Department leadership cannot ignore as it calls upon schools to experiment with new approaches.

Local school personnel believe a lack of coordination within the Department makes it difficult to gain approval for new programs.

Here again, whatever the actual situation in the Department, the opinion is abroad that whereas an instructional arrangement might be *approved by one office*, the physical facilities for housing it, for example, might be *disapproved by another*. This impression makes schools think that eliciting Department approval is complicated. It has a somewhat inhibiting effect on the introduction of distinctive new types of programs, especially those which do not fit neatly into single compartments of the Department organization.

Steps have apparently been taken in recent years to remedy this condition and it is not reported here as a major problem. However, if the Department leadership moves aggressively to accelerate the pace of change, maximum internal coordination will be essential.

The Department is somewhat encouraging when a school adopts programs officially endorsed by the Department and somewhat discouraging when a school adopts programs not officially endorsed.

People in local schools reported that the Department tends to be somewhat helpful in introducing programs it officially endorses. However, they said that Department reaction to programs it does not officially endorse is usually, "We don't say that you can't introduce that new program — but we would be just as happy if you didn't." Most schools find this attitude to be mildly discouraging and somewhat inhibiting. Two types seem unaffected: (1) The slow-changing, often low socio-economic districts which work entirely within the standard framework and never seek to cross the boundaries of Department approval, and

(2) the fast-moving districts, usually at the other end of the socio-economic scale, which commonly reported that they had learned how to deal with the Department in making instructional innovations: "Don't ask."

The Department is thus isolated from some of the most imaginative new efforts in the best-supported schools.

Regents Examinations inhibit educational change.

The Regents Examinations, beyond any question whatsoever, inhibit educational change in the State of New York. Serious students of the matter could hardly debate the point.

During May and June of 1961, the Consultant visited hundreds of high school classrooms, heard what was being discussed by teachers and students, saw what was written on the blackboards, looked at the books being used in the class, noted the other books students were carrying under their arms to other classes, talked briefly with many teachers and at length with many administrators. He offers this observation based on those visits: *Copies of previous Regents Examinations constitute at least ten percent of the curriculum* in the typical high school academic course (*the old examinations are the material studied for approximately four weeks out of forty.*) The hesitancy of many schools to break this successful pattern of preparing for Regents Examinations tends to dampen their enthusiasm for innovations which are distinctive in content or in approach.

Three rebuttals are ordinarily offered for the argument that Regents Examinations are inhibiting.

The first is simply that more is gained than is lost by their general use. For every school held down, it is said, several are help up to a minimum standard. The Consultant would respond that the schools which operate well beyond minimum standards and are kept from going even further by the Examinations are the very schools from which better ideas would be likely to come.

The second is that Regents Examinations are a convenient scapegoat for local reluctance to change. It seems to the Consultant that the Examinations are indeed scapegoats in some cases, but not in others. Unable to separate scapegoating from authentic objections, the Department is evidently unable to rec-

ognize the extent to which the Examinations block constructive change.

The third is that the Department encourages localities to substitute approved local examinations when they have good reason to do so. Although this encouragement has even been printed in Department publications, the Consultant can only conclude that the schools have not been convinced. He can point out, however, that high schools which say they are interested in experimentation but which have not tested this Department policy to the limit have no cause for complaint.

There is one additional consideration, external to the schools themselves. The tendency of boards of education and parents to use achievement on Regents Examinations as a criterion of school success slows the spread of innovations which might damage the local record. The only practical way to alleviate this problem is for the Department to place its own prestige behind innovations which may prove to be inconsistent with current Regents Examinations — and to suspend the use of those Examinations at least during the experimental period.

The Department has no adequate mechanism for encouraging experimentation with approaches it does not officially approve.

The Department spends much of its effort in "regulatory" activities, some mandated by the Legislature, others by the Regents. Many of its personnel have developed a habitual concern with enforcing minimum standards on sometimes recalcitrant local school systems. Exclusive concern for regulation has been changing rapidly in recent years, particularly among personnel at the very top levels, but the Department as a whole is still characterized by a prudential outlook. Moreover, partly in response to local requests, many bureaus develop a viewpoint about what is best for the schools and recommend specific programs to them.

Now it is difficult for any organization to insist upon or to recommend certain arrangements for schools and at the very same time actively to encourage experimentation with others. Scaling the problem down to individual men, it is difficult for any person to advocate one program vigorously while advocating, with equal vigor, that schools experiment with every other

type of program. The problem is not purely internal to the Department. The efforts of local schools to "locate" a bureau's viewpoint pushes it into adopting a consistent position to avoid confusion in the field.

As a consequence the Department has no adequate mechanism for encouraging lively experimentation with approaches it does not officially approve. The \$300,000 provided annually by the Legislature (originally \$200,000) to finance local experimentation and the funds used to support instructional television are the closest approximation to such a mechanism.

The Field Supervisors are so few in number and have such diffuse responsibilities that they have little influence on the schools.

Because they are the traveling representatives of the Department, the Field Supervisors were mentioned to the Consultant again and again in connection with Department impact on instructional innovation. The viewpoint of the Supervisors was interpreted as the viewpoint of the Department, their performance as its performance, their alertness to change as its alertness to change.

The Department depends heavily upon Supervisors for contact with the field. They have two basic functions: (1) inspection of local school programs to see that they meet regulations, and (2) communication between the Department and the schools, and among the schools themselves.

Recently the Department has begun to see the Supervisors as consultants available on request rather than as inspectors. It became evident during the survey interviews that either as inspectors or as consultants, the Field Supervisors are too few in number to have any appreciable effect on local school programs. (There are, for example, *three* Field Supervisors in English serving approximately 700 high schools.) Some schools described the Supervisors as helpful when they came, but almost all agreed that they came so seldom that they would scarcely be missed if they didn't. Many schools said that years elapsed between supervisory visits. It is little wonder that virtually all of the schools visited, upstate and downstate, in large cities and in rural areas, said they would not care if they never saw a Field Supervisor again.

The only exceptions appeared to be in some of the vocational and technical fields -- notably vocational agriculture, repeatedly singled out by superintendents and principals for special mention -- where there seem to be a sufficient number of people in relation to the limited number of programs in the State and where the Supervisors seem to exert more aggressive leadership than those in other fields.

The Department is too small for the job it is attempting — and can never be made large enough.

It is sometimes charged that the State Education Department is too large and that it suffers from the classic ills of a large organization — reluctance to accept responsibility, lack of coordination, poor internal communication, red tape and sluggishness.

The Consultant counters with another observation based upon information gathered during the survey: The Department is too *small* — for the job it is attempting. In its efforts to supervise or to help almost 900 public school systems through direct contact, the Department is spreading its resources far too thin. It assumes that it is performing functions which it cannot perform; it promises aid which it cannot give.

To take only the most recent example in a long series, the Department announced in 1961 the creation of a Cooperative Review Service. The Service proposes to blend State and local resources on request in a comprehensive survey of any local school program, using instruments developed by the Department and applied by the locality, with the results reviewed by both. This effort to make concentrated, focused use of Department personnel is admirable. But the Service, beginning with New York City in 1961 and continuing at an assumed rate of five local studies per year, would take 180 years to reach every school district.

Of course the survey forms will be available for local use by any interested school. Properly designed, with adequate norms and with *firmly established connections between given institutional provisions and given educational outcomes*, the survey forms could show schools what they must do to improve this or that specific result. The Department could perform a historic service by sponsoring the research necessary to perfect the

forms, bringing to fruition the pioneering work of the Quality Measurement Project. Instead, in its eagerness to help local districts through direct service, the Department will have its personnel review local data gathered with what are very likely to be inadequate instruments.

The Consultant offers the opinion that the Department, even doubled in size, could not effectively provide *direct service* to local school systems — on either a supervisory or consulting basis, using either central or regional offices. There are, however, other functions, desperately needed but now neglected, which the Department *could* perform. One of them is outlined in Section II of this report.

An urgent cry for State leadership is being uttered by administrators in all types of school districts across the entire State — large and small, urban and rural, wealthy and poor, active and inactive.

Whatever the strengths and weaknesses of the State Education Department past or present, there is today a strong desire on the part of public school administrators for positive leadership from the State level. They do not ask that the Department take over decisions for the schools, but rather that the Commissioner of Education help the schools organize so that they can change more rapidly and with a greater sense of certainty.

The Consultant was quite surprised at the consistency and the strength of this desire in all types of schools wherever he went. Pressures on the schools are mounting and the road ahead is not clear. The time is ripe for bold State leadership.

The Colleges and Universities

Except for their role in training teachers, which is universally regarded as being of critical importance, the colleges and universities have little influence on instructional innovations in elementary and secondary schools.

The elementary and secondary schools act for themselves. Few specific instructional programs in these schools can be traced directly to college or university interest. Among the exceptions are some of the college-sponsored courses and semi-

nars for high school students located on the campuses. But as valuable as these are for the participants, they affect an almost negligible fraction of the hundreds of thousands of high school students in New York State.

Because an interest in college admission suffuses the atmosphere of the entire school system from kindergarten upward, it is easy to develop the erroneous impression that colleges and universities guide instructional developments in the lower schools, particularly in the high schools. The climate of concern about college admission has of course been intensified by rising college entrance requirements. The chief effect on the high schools probably has been to cause greater care in course selections for college-bound students. Some high schools also have attempted to improve their college-orientation procedures. Responses of this kind must be distinguished, however, from the initiation of new types of instructional programs. Moreover, a case in which a high school amends its own program out of a concern about the future education of its graduates must be distinguished from a case in which a college sponsors the use of a new approach by high schools. The high schools are unquestionably sensitive to college expectations, but those expectations concern the qualifications of students and not the instructional methods of the high schools. Even in communities of high socioeconomic level, from which a large majority of graduates are expected to continue into college, the anxiety about college admission is a general anxiety and the effect it has on the schools is quite diffuse. The evidence gathered in this study, for example, points unwaveringly toward the conclusion that innovations in college-related subjects have received little more additional attention than innovations in other subjects.

The colleges and universities are not well organized to exert direct influence on elementary and secondary programs and do not consider this to be one of their basic responsibilities.

Institutions of higher learning are organized to teach regular courses of predetermined content and predetermined length to individuals who elect to come to the campuses. Faculty time is allocated primarily to teaching those courses. (Some institutions expect a certain amount of new knowledge to be produced by

their graduate faculties and provide a modest amount of leisure for staff members to make efforts in that direction.) Most colleges and universities ordinarily keep their staff members so occupied with responsibilities on the campus that they have limited opportunity for relationships with the lower schools. Moreover, even if time becomes available, neither teachers nor professors expect a working relationship to develop except between teachers and the professors in the school of education.

Individual professors and occasionally college divisions organized for the purpose have a limited amount of time to provide consulting services to elementary and secondary schools. The effectiveness of their services is bounded by the time available to perform them and by the willingness of school systems to seek them out and pay for them. On the whole, very few of the local programs studied during the survey had been suggested, planned, evaluated, or even visited by college personnel — on either a paid or voluntary basis.

For instructional shifts of major scope, as indicated earlier, the individual teacher is not a strong agent of change. To introduce such shifts successfully, it is necessary to deal with the entire staff rather than with individual teachers. The colleges, however, even in their most energetic efforts to extend services to elementary and secondary schools, seldom break the habit of dealing with teachers as individuals. One reason is that the standard pattern is familiar and manageable. Another is that school systems rarely offer to underwrite an entire college course so that it can be limited to their own teachers.

Some schools of education offer an elaborate series of in-service training experiences to elementary and secondary school teachers. Such courses may be offered off the campus at convenient locations near the schools, and they may be outside the customary college framework with respect to number of sessions, credit granted and tuition charged. They are, however, usually *within the customary framework* in this respect: interested teachers register as individuals. The point is critical because it means that the course must teach information and skills which will be useful in a variety of school settings. It cannot be directed narrowly toward the needs of one particular system, *the form in which it would be most useful to a school system adopting a new instructional program.*

Nevertheless, it should be pointed out that almost all of the college personnel interviewed during the survey — those in administrative and those in teaching positions, those in large and those in small institutions, those who had much and those who had little actual contact with the elementary and secondary schools — indicated that they were eager to provide all the services necessary to accelerate the pace and improve the direction of educational change in the elementary and secondary schools of the State. They expressed the belief that if their institutions were properly financed or subsidized by the State, they could manage the task and manage it well, at least for the schools in their geographic regions. It became obvious early in the interviews that college personnel in schools and departments of education would prefer the State to give them the funds and the responsibility for improving programs in the lower schools. No other arrangement, in their opinion, would be as satisfactory.

It was extremely impressive to see college after college volunteering to provide any service which individual school systems or the State as a whole (preferably the latter) would finance. Nonetheless, it seems unreasonable to believe that the institutions of higher learning in New York State, organized as most of them are for one or two functions, could sufficiently amend their organization and working patterns to provide to elementary and secondary schools all the outside help they require to improve their programs.

Teacher education programs, according to the people who staff them, do not attempt to equip the prospective teacher with specific instructional techniques, but concentrate on developing a general professional wisdom out of which he can develop the specific techniques he needs for any given task. Actual instruction in specific techniques is said to be the responsibility of the schools which employ the college graduates.

College teachers pointed out repeatedly during the interviews that they consider it a mistake to teach narrow skills to beginning teachers who may follow them slavishly in all kinds of situations. They feel it is safe to concentrate on specifics only in graduate courses or in-service sessions for experienced teachers,

whose backgrounds prevent them from applying specific techniques in inappropriate settings.

Several reasons were offered in explanation by college faculty members. All are worth careful attention. One is a shortage of time, a condition which may be accentuated if new certification requirements limit the attention given to methodology. Another is that because specific skills are looked upon as transitory, the college tries to build a basic body of values and knowledge which will outlast the popularity of any particular technique. Still another is that college personnel often are not familiar themselves with the details of using a specific technique. Many of them have never worked as a member of a teaching team, conducted an individualized reading program, taught before a television camera or used an electronic language laboratory. The dominant reason, however, seems to be that teaching specific methods simply does little good because they rarely last through the first year of teaching in a school which does not want them.

Regardless of the reason, college faculty members said that specific methods will be learned by the new teacher on the job. Those skills are left to be taught to him by the schools where he works — a responsibility which most local schools patently are unable to meet.

Despite college disclaimers of any serious effort to teach specific techniques, the Consultant came away from the interviews with the strong impression that certain specific techniques are indeed taught, but that they can be better described as "currently in vogue" rather than as "basic professional wisdom."

Most college people familiar with what is taught in educational methods courses on the campus explained that teachers in training are taught how to use a textbook, develop a resource unit, make lesson plans, assign homework, conduct class discussions, and help students review for tests. On the other hand, very few methods courses teach candidates how to use teaching machines, how to work in front of a TV camera or beside a TV receiver, how to perform as a team member, or how to know what can be taught as well in a lecture hall as in a seminar room. The former are techniques which are in almost universal use in elementary and secondary schools; the latter are still rare.

Teacher education programs do not train teachers in how to carry out new instructional processes until those processes are in general use in the elementary and secondary schools.

College faculty members explained again and again during the survey interviews that they had experienced utter futility in equipping teachers with skills which were not needed or not wanted in the elementary and secondary schools in which those teachers subsequently went to work. Local community traditions, the accustomed ways of the existing staff, the attitude of the administrators — all converge upon the beginning teacher and shear off any college-taught skills which do not fit local patterns. After such experiences, beginning teachers may look back upon their college training programs as “unrealistic” and are often disposed to abandon much of what they were taught at college as being unusable in everyday situations.

No one in the profession understands the necessity for continuous in-service education as well as the college personnel who are providing pre-service education. They understand as no one else does how much more is needed to develop professional competence.

Most college faculties said quite frankly, “We do not pretend to turn out a finished product.” That comment usually came in response to any inquires about what steps the college had taken to instruct teachers in the skills they would need for carrying out the new types of programs which are on the horizon. College faculty members went on to say, as indicated earlier, that elementary and secondary schools must themselves provide substantial in-service opportunities if they expect teachers to develop real competence not only in novel programs, but even in existing ones.

Although they regarded it as desirable, the superintendents, principals and teachers who were interviewed during the survey had no such clear-cut conviction of the need for local in-service development. It was not surprising, consequently, to find that few local school systems had a program of in-service education

which could even begin to fill the gap pointed to so insistently by college personnel.

The Campus Schools at the State University Colleges

The campus schools at the eleven state university colleges — schools for elementary or secondary students, located on the campuses — make little use of their State financing and independence of local public control to design, evaluate or demonstrate new instructional approaches. These schools seem to engage instead in the demonstration of long established programs of proven quality.

Although it was not possible to visit classes in the campus schools during the survey itself, the Consultant inquired about and discussed them at length in every school system and in every college and university visited during the survey. In some cases campus school administrators and teachers were interviewed. Opinion among all those interviewed was uniform on one point: a campus school is *not* a place one visits to observe distinctive new types of instructional programs.

The whole history of campus schools in the United States up to and including the present day is replete with conflicting expectations as to what they should accomplish. New York State is no exception. Taking the profession as a whole, it expects of the campus schools an assortment of functions no one institution could perform. They are expected, all at once and in a single setting, to design new instructional approaches, to evaluate their effectiveness, and to demonstrate them in such a manner as to impress visitors from the public schools, while at the same time showing pre-service teachers the best known ways to teach — and to accomplish all of it while providing sound, dependable instruction for the children of a watchful college staff and the more articulate local parents. How do the campus schools respond to all these demands?

Do they try to design new instructional approaches? This is something we *might* expect because campus schools embody some of the conditions identified in this study as conducive to design efforts — such as independence of local public control.

Despite their special circumstances, the campus schools in New York State, like most of them across the country, are not experimental. Powerful constraints make bold experimentation impossible in these schools. One such constraint is the belief of the college faculty that prospective teachers who visit the classrooms might be indelibly impressed by questionable methods because they lack the experience to judge unorthodox approaches critically. Another is that a school devoted to demonstrating the best known methods is not free to experiment aggressively with untested methods.

Do they put their programs through an unusually intensive evaluation? This is something we *might* expect because the college faculty — in their role as students of education — might insist on establishing beyond doubt the value of the procedures used in the campus schools. However, the campus schools are not noted for extraordinary evaluative procedures. Except for the enormous number of subjective evaluations added by the faculty and student observers who frequent the classrooms, which in terms of evaluative technique must be classed as “more of the same,” they behave much like the typical public school. Extraordinary evaluation would be possible for the campus schools, but they evidently do not consider it a special responsibility.

Do they serve as models to the public schools around them? This is something we *might* expect since their programs are orthodox in type, but perhaps better than average in quality. The answer to this question is a flat “No.” Providing leadership by example is one function the campus schools could not possibly perform. In the eyes of the public schools, the campus schools are abnormal, artificial and unreal. Their independence of local tax revenues, their relative freedom from public control, their enrollment in most cases of a selected study body, their receiving the devoted attention of a parent group consisting in part of professional educators, and even their location on the college campuses all conspire against the credibility of their programs in the eyes of public schools. The Lincoln School at Teachers College, Columbia University — probably the best-known campus school in the State — was closed primarily because it failed to influence the public schools.

The campus schools demonstrate the conventional wisdom. This is what we *should* expect because they are controlled by teacher-education faculties who understandably want to show prospective teachers the best known ways to teach, and they are watched over by professors and other parents who understandably want a safe and sound education for their children. Thus the campus schools seem to find justification in their contribution to teacher education. And yet that picture is also cloudy.

Consider first the matter of demonstrating sound, conventional programs so that prospective teachers can observe them. Why should the State spend millions to demonstrate the conventional wisdom in special schools when it abounds in ordinary schools? It is a bit like raising potatoes in a greenhouse.

What about the situation of practice teaching at the State University Colleges? The State has failed to enlarge the campus schools as college enrollment has expanded and the heavy majority of candidates for teaching must gain their classroom experience outside the campus schools. It is ironic that by admitting better students the campus school removes a number of them from the local public schools to which some practice teachers will go for experience. This must create a striking contrast between what those young teachers have observed in the campus school and what they find in the classrooms where they have practice teaching.

To cap off the pyramid of contradictions, the State Education Department grants certification each year to a great number of beginning teachers who were trained at private colleges and universities and who have never been inside a campus school. Evidently the Department does not consider campus school experience an essential part of teacher education.

In summary, the role of the eleven campus schools in New York State has not been resolved. Although they enjoy an independence which should enable them to be experimental, they are not; although they presumably should subject their programs to extraordinarily intensive evaluation, they do not; although they demonstrate sound, conventional programs of established quality which should enable them to serve as models for the public schools around them, they are not; and although the

State spends millions of dollars annually to operate and to maintain them as part of teacher education, observing or teaching in them is not required for teacher certification.

The Professional Associations

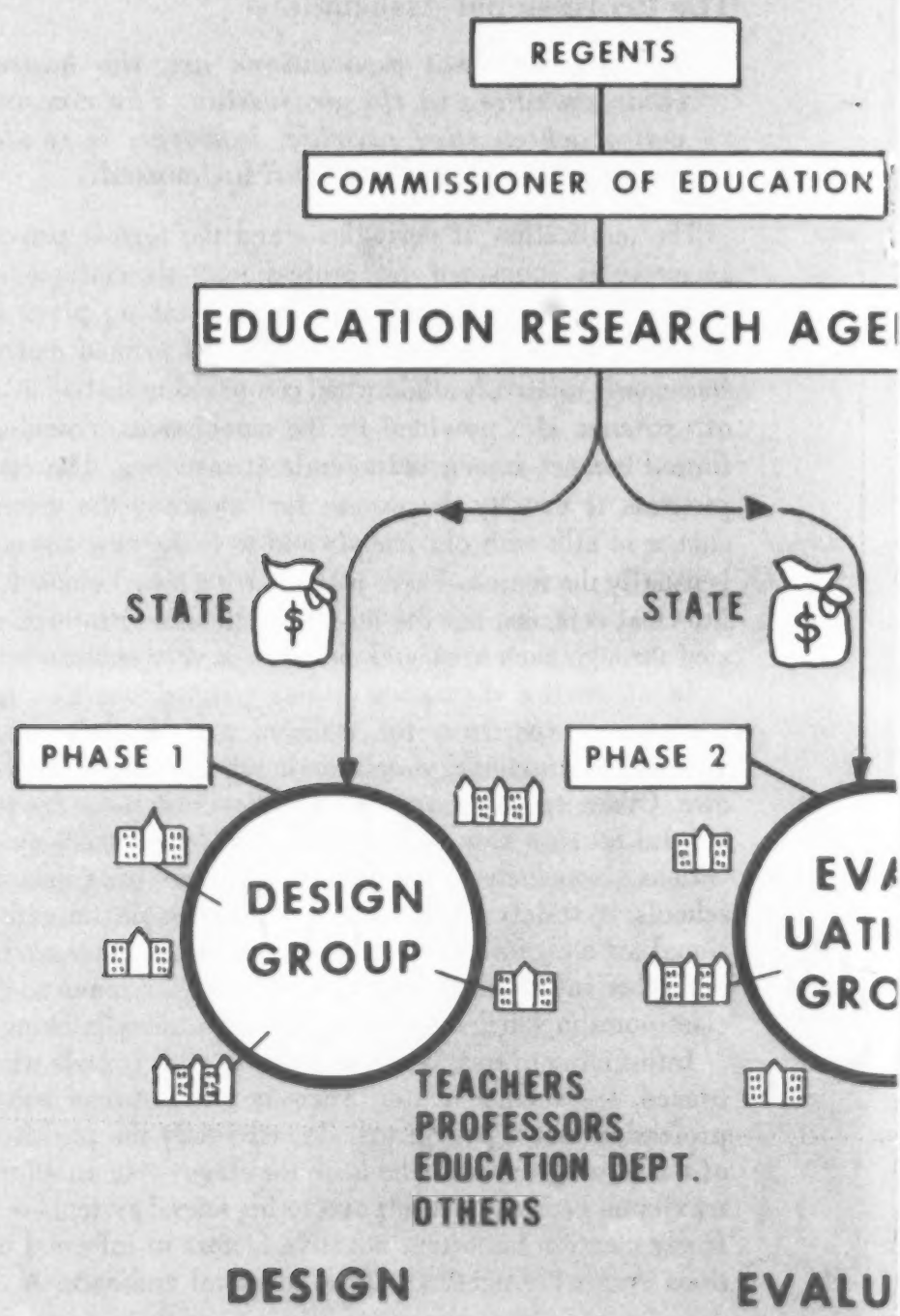
The professional associations are the supreme communicators in the profession. The communication which they provide, however, is random, disjointed, overlapping, and unfocused.

The publication of periodicals and the formal presentations at meetings sponsored by professional associations serve to acquaint school personnel with what is taking place in other schools. However, the persuasive effect of printed material and speeches is relatively slight when compared to that other medium of exchange also provided by the associations, namely, the informal contact among individuals at meetings. The convention program is usually the excuse for attending the meeting; the chance to talk with old friends and to make new acquaintances is usually the reason. There is of course a social element in these informal contacts, but the load of professional information carried through such unofficial channels is very substantial.

In an earlier discussion it was pointed out that the great persuasive experience for teachers and administrators is to visit new instructional programs in schools very much like their own. Other ways of learning about new programs are of course helpful because they make people alert to the existence of innovations. Nonetheless, the full *truth* about programs in other schools is widely believed to be unavailable through professional articles, formal speeches at conventions, research reports and other information sources which are far removed from the classrooms in which the new instruction is actually being offered.

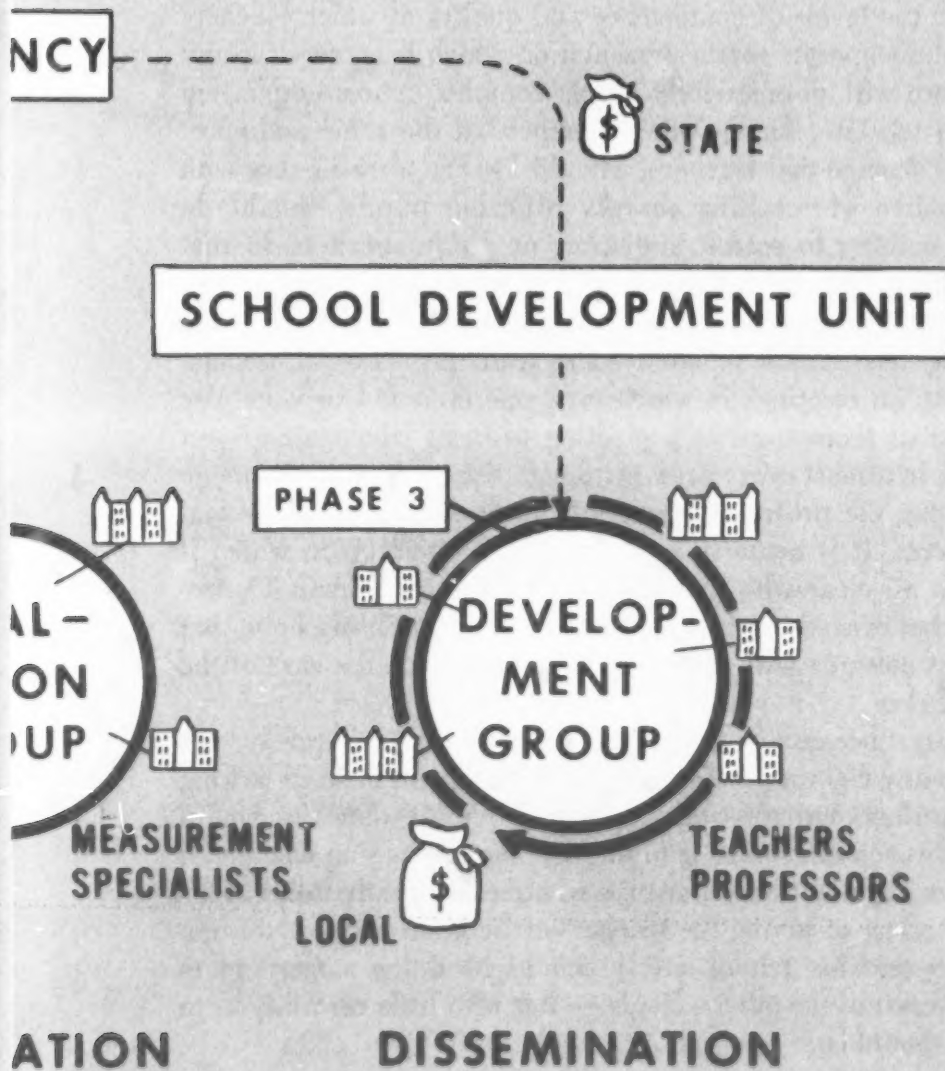
Informal conversations, particularly with friends who can be trusted, are another matter. There is a widespread belief in the profession that a person will describe only the positive aspects of a new program while he is on the stage — in an effort to give maximum credit to himself and to his school system — but will freely mention important negative factors in informal conversations even with members of the identical audience. A talk with

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A plan for improving the process of educational change in the elementary and secondary schools of New York State. A detailed description of this plan begins on page 80



a trusted friend who knows a new program from personal experience is very close to an actual visit in its persuasive effect. This is the kind of communication, arranged by professional associations as a natural part of their meetings, which has greatest impact.

Program planning by the associations, often managed through the use of committees which have a complete turnover in membership every year, is almost aimless. Deploring the tendency of school people toward faddism and criticizing the habit of responding to the pressures of the moment, the elected officers of professional associations let these identical forces dictate the content of their meetings. Furthermore there is such a wide range in the levels of competence and quality at which teachers and schools operate that a presentation which is correct for any one group will automatically be too complex or too simple, too early or too late, for the other members of the same audience. It seems strange that teachers, who deal every working day with the problem of reaching sharply differing pupils, should do almost nothing to screen audiences or guide speakers so that better learning could take place at professional meetings.

A failure to understand the dynamics of instructional change as it operates in most school systems leads professional associations to plan meetings in which everyone talks to everyone else as if all of them were in a position to bring about significant changes in almost every area. Although this is done in the name of keeping the profession generally alert to major educational movements, it is actually a response to a situation in which it is not at all clear who should be saying what to whom. The result is that everything is said to everyone in the blind hope that the right message will somehow find its way into the ears of the right listener.

Finally, because instructional innovations are rarely put through any rigorous testing, people who present them in writing or at professional meetings can do little more than describe a new approach and leave it to the listener to imagine whether it might or might not be better than what he is already doing. This has the effect of giving the teacher or the administrator the impression that his school surely should be doing something to keep abreast of the other schools — but with little certainty as to what it should be.

The College-Affiliated School Study Councils

The college-affiliated school study councils act primarily as communicators of information. They are rarely tied in directly with the process of changing the instructional approaches used in their member schools. With a few notable exceptions, these councils are generally poorly financed and weak in influence.

One of the most interesting efforts to accelerate educational improvement in New York State since 1940 has been the development of nine regional college-affiliated associations of public school systems, most of which are called school study councils, with their executive officers drawn from schools of education in the sponsoring colleges. These councils work in somewhat different styles and tend to reflect the interests and vigor of their executive directors. They cover a great range in terms of size of staff, budget, number of members, types of school districts served, and effectiveness.

The chief function of the councils has been to increase communication among member school systems by arranging meetings, publishing bulletins, organizing study committees of teachers and carrying out statistical studies. They have undoubtedly reduced the insularity of their members. However, the fees paid by schools to join these organizations (fees ordinarily set by a governing committee of school superintendents) have been kept quite low. It seems likely that the councils, partly because of inadequate leadership and partly because of apathetic past responses by schools to council proposals for expanded services, have been unable to outline for member schools a body of services complete enough to justify substantial membership charges.

A consequence has been that the councils have been unable to provide services in depth. For example, although council communications may have aroused initial interest in some of the new instructional programs studied in this survey, only a small number could trace their actual introduction into local school curricula to school study council sponsorship and assistance.

It was stated earlier that colleges and universities have little influence on the introduction of new types of instructional pro-

grams into elementary and secondary schools and that they are not organized to exert such influence. It should be made clear in discussing the contributions of school study councils that their impact, whatever it has been, cannot be credited to the sponsoring colleges. The initiative exerted by individual professors in germinating the councils has been highly significant, but *it is useful to distinguish their personal initiative* from the ordinary functions of their institutions. The colleges which sponsor the councils do not subsidize them financially, which is entirely understandable in light of limited college resources. Member school systems pay for services received, unless there happens to be outside financing by a third party, as has been the case in recent years with the support of the Catskill Area Project in Small School Design by the Fund for the Advancement of Education.

The colleges themselves derive certain specific benefits from the organized, long-range relationships with public school systems which the study council pattern provides. Among those benefits to the colleges are the following: a generally wider reputation; an attractiveness to teachers who are contemplating graduate study; an enlarged school of education faculty with additional clerical staff, office supplies, and equipment; additional research and publication funds; and financial assistance to graduate students. These benefits are listed to show that the councils can best be understood not as service arms of the colleges, but as organized clusters of local school systems which have their headquarters on college campuses.

The councils have grown in number and in membership since 1940, but probably not in degree of effectiveness. They have an evident appeal to schools yet they fall far short of what a regional association might accomplish. It became apparent during interviews with school superintendents, principals, and teachers that few of them had a clear notion of what they expected or even hoped to receive when their school systems joined councils.

The councils seem to be one fragment of an answer to a large problem — a fragment which tells much about what local school systems need from outside agencies, but a fragment which cannot meet those needs. In a statewide reorganization of the proc-

ess of instructional change, it should be replaced with a more complete answer.

The Private Philanthropic Foundations

The great contribution of the private philanthropic foundations in education, as in other fields, is that they have created conditions under which able people could be freed to concentrate at least temporarily on limited functions.

Because most of the people in the profession of education are permanently immersed in situations which require a breadth of responsibility impossible for them to encompass adequately, the freedom provided to able men by foundation grants has been of particular benefit. Many have been able to focus their concerns and to draw upon all kinds of resources for the first time.

The private foundations have sponsored two kinds of activities related to educational innovation:

1. Basic research, most of it in related fields from which education draws its fundamental information, as psychology, sociology, political science, and, other social sciences.
2. The development of specific instructional programs, such as the dual progress plan financed by the Fund for the Advancement of Education and developed in Long Beach and Ossining, New York.

The support of basic research has had no clearly identifiable impact upon the schools because the information developed becomes part of a great pool of knowledge and is drawn upon variously in the making of innovations. Support for inventing new approaches has been highly visible, however. Most of that support has come from the Fund for the Advancement of Education of the Ford Foundation. The Fund has been criticized for promoting the development of specific programs which its own staff feels are desirable and for disseminating innovations before they were proven. (The staff of the Fund counters with the statement that it *has no program preferences* as a total staff and that because research tools are not adequate, it sponsors demonstrations and submits them to the judgment of the profession.)

It is difficult for private foundations to promote the spread of the distinctive approaches they have sponsored because of the professional suspicion aroused by any new approach, particularly one which is being actively advertised.

The Fund for the Advancement of Education has accurately assessed the tendency of school people to be persuaded largely, if not exclusively, by demonstration. It has accordingly demonstrated from the very beginning those design efforts which it has sponsored. However, as indicated before, design efforts cannot be effectively combined with demonstration efforts because the visitor identifies the artificiality of the design setting — in this case the additional money supplied by the Foundation — as the probable cause of the success of the program and as an element which he cannot reproduce in his own schools.

There is great value in sponsoring experimentation with approaches which break with the conventional wisdom, approaches which existing institutions do not officially endorse. It has been pointed out before that the State Education Department has no adequate mechanism for sponsoring experimentation with approaches it does not officially endorse. The Fund for the Advancement of Education has provided a highly desirable new force in the dynamics of educational change.

The Commercial Organizations

The commercial organizations such as textbook publishers are extremely powerful. When they promote an instructional change, a great wave of influence sweeps over the schools. On the other hand, once they begin to market a given product, they serve as powerful inhibitors of change because they seek volume distribution and repeated sales of the same product.

One reason for the power of commercial organizations such as textbook publishers is the fact that they move rapidly. They must respond quickly to the needs — and even to the anticipated needs — of the schools if they are to survive in a lucrative but highly competitive market. The speed with which they introduce innovations, a speed which often outruns the verification of any

actual utility in their products, is a continuing cause of concern to judicious members of the profession.

Another reason for the success of the commercial organizations is that they are aggressive in bringing their services to the attention of schools, both through advertising and through the use of numerous sales representatives. Moreover, they are able to make necessary equipment and materials available quickly and in convenient form.

Reserving a new instructional approach for evaluation and dissemination solely through professional channels is sometimes recommended to prevent its headlong promotion by commercial companies. This would be impossible without a revolution in the relationship of public schools to the private enterprise sector of the economy.

Take the development of programmed learning materials (for use with or without teaching machines) as a case in point. Some of the people familiar with the principles of programmed instruction feel that classroom teachers should write programs for use in their own classes. It seems entirely unlikely that most teachers in the school systems of New York State, carrying a heavy teaching load that occupies all of their time and in many cases overburdens them, would have either the time or the training to write their own programs. It is unlikely that school administrators would want to wait for them to do so. There are of course a certain number of people in the colleges or with foundation support who are free to engage in programming. Nevertheless, it is inconceivable that commercial organizations will stand aside over the next decade, let us say, while the few people in the profession who have the inclination, skill, time and resources proceed to write new programs, test them in pilot applications, revise the materials, evaluate them thoroughly through extensive field testing in schools, and then somehow arrange for volume production and volume distribution. Instead of waiting, the commercial concerns have already moved heavily into the area of programmed instruction. So far as the Consultant could determine, they have made more elaborate plans for getting programs written and have forecast larger budgets for getting them published than any other type of organization. They will undoubtedly play the dominant role.

Commercial enterprises, interestingly enough, usually de-

scribe themselves as "keeping an ear to the ground" to anticipate new directions in school programs so that they can pave the necessary roads with their own products. Metaphor aside, the question they ask is "Will it sell?" It might seem from this that commercial organizations respond to rather than guide educational developments. However, because schools are scattered over a wide band in terms of the adequacy of their instructional programs, with some schools years ahead of others, the commercial agencies are a strong influence in actually setting directions.

Here is how it works. If the companies anticipate that the interests of the more alert schools will eventually become universal and they go on to manufacture products to meet those interests, slower-moving schools are led more easily into the same pathways by the ready availability of convenient instructional materials. At the same time, because the commercial concerns are seeking to develop materials which will command the widest possible market, they tend to develop products of lower quality than those which could be used by the most alert school systems and the best pupils. This has the effect of slowing developments in faster-moving schools because they too depend on commercially-produced materials for use in their own instructional programs.

All in all, the commercial organizations tend to be a unifying influence over curriculum content and instructional methods, not only statewide but nationwide, probably holding the better schools and the better teachers short of the point they could reach while taking poorer school systems and less capable teachers further than they would otherwise go.

The Three Phases of Instructional Innovation

The key conclusion of this study is that the DESIGN, the EVALUATION, and the DISSEMINATION of innovations are not at all the same. They are three distinctly different processes. The circumstances which are correct for any one of them are essentially wrong for the others. They cannot be reconciled.

Phase 1:

Design *The ideal circumstances for the DESIGN of an improved instructional approach are artificial, enriched and free.*

At their best, they provide a group of highly intelligent people, a somewhat limited problem, time to concentrate on a solution, ample money and resources, freedom to try almost anything, the likelihood that the solution will be used somewhere, and the prospect of personal recognition if the problem is solved. The more artificial, enriched and free the setting, the more distinctive the innovation it is likely to produce.

Phase 2:

Evaluation *The ideal circumstances for the EVALUATION of a new instructional approach are controlled, closely observed, and unfree.* At their best they provide conditions in which the forces which might influence the success of the new approach can be controlled when possible and kept under close surveillance when actual control is impossible. The freedom which is essential in searching for a good *design* is destructive in the making of a good *evaluation*.

Phase 3:

Dissemination *The ideal circumstances for the DISSEMINATION of a new approach through demonstration are those which are ordinary, unenriched, and normal.* At their best, they are exactly like the everyday situations in the observer's own school and community. Anything which the observer could label "abnormal" or "unrealistic" — such as the enriched conditions necessary for good *design* or the controlled conditions necessary for proper *evaluation* — is sufficient to rob the observed program of persuasive effect.

The most formidable block to instructional improvement today is that education — unlike medicine, agriculture and industry — fails to distinguish the three phases of change: design, evaluation, and dissemination. Moreover, it fails to support adequately the basic research which should precede the design phase.

Let us examine each phase in detail.

Phase 1: Design in Enriched Circumstances

Program design is the translation of what is known about learning into programs for teaching. The process might be called *invention* or *creation*.

The essential ingredients of a good design setting are a richness of talent and a freedom to explore. Imaginative new programs are most likely to come from capable people who have time to concentrate on solving limited problems, who can draw on a wealth of resources, and who are free to try anything promising and free to abandon anything defective. Any kind of restriction in a design setting lessens the chance of getting a truly distinctive answer.

The typical operating school does not provide a setting rich enough or free enough to generate new instructional programs. Faculties usually carry heavy responsibility for operating standard programs. Often overburdened with routine duties, they can rarely take their hands from the wheel of labor long enough to invent something better. Even the best-endowed suburban school systems, upon which we have depended for certain innovations, do not provide sufficient artificiality (in the sense of great talent and extraordinary freedom) for bold new designs. What they provide is a chance for teachers to do the best that is already known.

The contribution of some private philanthropic foundations in freeing men to design new approaches was mentioned previously.

One of the reasons for the influence of commercial organizations is that by the payment of royalties they have been able to release some of the time of able men for designing and writing new instructional materials. Royalty payments, small as they are, represent one of our heaviest investments in the improvement of teaching aids. The Consultant is convinced, for example, that more "teaching machine" or "programmed instruction" materials will be stimulated by this type of investment than by any other.

The national curriculum studies sponsored by the National Science Foundation — PSSC physics, SMSG mathematics, BSCS biology, CHEM and CBA chemistry — all sprang, without exception, from artificially created, enriched, free settings. They did not arise naturally from the workaday world. None of them would exist today if a large group of talented men had not been paid and freed to concentrate specifically on designing them.

It is true that innovations do not come *only* from enriched circumstances. An imaginative teacher may invent a new ap-

proach no matter how overburdened he is with routine — desperation itself is a powerful motive. Properly led, a group of able teachers may design a new type of instructional program even while they operate the old one. But the question is not whether it can happen. The question is whether we should depend upon it.

Enormous gains could come from making the process more conscious and deliberately creating the best settings for it. The greatest gains of all would come from supplementing teaching experience with the results of basic research and translating both into new types of teaching programs.

Phase 2: Evaluation Through Field Testing

Program evaluation is the systematic testing of a new instructional approach to find what it will accomplish under what conditions. The evaluation of programs by using them in many different schools under carefully controlled or closely observed conditions can be described as *field testing*.

In the test, the novel procedure must be used over a period of time and its results compared with the results of other procedures used under similar conditions. This process requires two restrictions: 1) procedures must not be changed in mid-stream; otherwise it will not be clear what is being evaluated, and 2) the circumstances in which the procedures are used must be kept comparable; otherwise it will not be clear what is determining the outcome.

A broad field test is desirable because we know so little about the conditions which affect learning in school. New programs should be tested in circumstances so diverse that all the forces which play upon learning, even though unknown, will nonetheless be present to influence the results. A program may prove satisfactory in most schools while giving spectacular results in one particular setting and abysmal results in another. Only by extensive field testing can we avoid the error of labeling a program a success or a failure because it happened to be tried in a *single circumstance* where an *unknown* factor dictated the results.

Local school systems are not essentially interested in *experimenting to determine the value of an innovation to schools at large*; they are essentially interested in *improving the local program through adopting the best of what is known*. This is in

keeping with the function of a local school, which is to produce educated people, not to search for general truths.

A school system introduces only those innovations it already believes will improve its program. Any evaluation which takes place is designed to test the validity of the original judgment. The question asked is "Has our own program improved?" and not "What is the innovation worth compared to procedures used in other schools?"

The individual men who are interested primarily in experimenting to find general knowledge do not fit comfortably into local schools and often have an abrasive effect.

A familiar lament about the "research divisions" established by some large city school systems is that they spend their time collecting routine data about internal school operations. They ordinarily forecast pupil enrollments, manage testing programs, gather cost information, analyze personnel data, and the like. These are the activities needed to guide and control production. Any producing organization will inevitably insist upon production control activities, giving them priority over a search for better procedures. Moreover, in the case of a school, an instructional change is not evaluated by using the kind of information the research division would provide.

People interviewed during the survey complained repeatedly that outside organizations often promote the use of unproven innovations. They cited as typical examples the promotion of television by the State Education Department, the promotion of curricular reforms in mathematics and science by the National Science Foundation, the promotion of team teaching by the Ford Foundation, and the promotion of flexible scheduling in high schools by the National Association of Secondary School Principals. However, the Consultant found that local schools themselves are not evaluating any of these innovations except by asking the local question "Has our own program improved?" and finding the local answer by observing the reactions of students while they are receiving the new instruction.

Although local school systems will not conduct significant experimentation on their own initiative, the Consultant found through his interviews that they will gladly participate in rigorous field testing sponsored and financed by outside organizations.

Phase 3: Dissemination Through Demonstration and Re-education

Program dissemination is the process of spreading innovations into schools. Hopefully, the innovations have been evaluated beforehand to determine what they will accomplish under what conditions.

There are two major steps in moving a new instructional program into a school: (1) convincing the school administrators that the school should take on the program and (2) teaching the school staff how to conduct it. (Necessary equipment and materials must of course be acquired by the school.)

The most effective way to convince a school staff that it should adopt a new program is to let it observe the successful new program in action. Nothing persuades like a visit. Written descriptions of the new program, speeches about it and research reports concerning it should all be regarded as preliminary or supplementary to a visit.

The innovation must be demonstrated under conditions which are not abnormal, artificial or unrealistic — that is, not too different from the everyday circumstances in the observer's own school and community.

The most persuasive demonstration consists of the continuing use of the new approach as a basic part of regular instruction in a normal school setting. Anything which smacks of a "performance" by extraordinary teachers working under artificial conditions for a limited time is likely to be unconvincing. The observer may express interest, but he cannot be certain the approach would work day in and day out in the hands of the average teacher in his own school.

After the visit, if the local school decides to take on the new program, it is essential that its staff be thoroughly educated in the professional skills necessary to carry it out. The development of these qualities in the staff requires far more elaborate steps than most schools even think of providing. Present patterns fall into two main types: (1) individual teachers select individual courses at various colleges, or (2) schools offer "workshops" which often are open to volunteers, run 20 or 30 clock hours, are led by people not much superior to the local staff, and are taught in an introverted manner which makes the group act as its own resource.

In the best circumstances for re-education, the teacher of teachers knows more about the innovation than those he is re-educating, and has himself succeeded in using the program with children. The instruction reaches simultaneously all teachers who should use the innovation, extends over a long period of time and is interspersed with actual classroom practice in using the innovation.

Curriculum specialists have taken great pains to confuse curriculum development and in-service training. As a result the two are seen by some schools as identical, giving them the erroneous impression that teachers undergo re-education while serving on curriculum committees. No doubt they learn a little something even on the typical committee, but as with so many of our efforts in the budding profession of education, *a little something is worse than nothing* because it hides the problem without solving it. Some curriculum specialists push the confusion to an advanced stage by reasoning that since curriculum development and in-service training are identical, a teacher cannot be trained except by developing the curriculum he is to teach. This means that he cannot teach a program he has not helped develop. How this notion lives on in a world of fact which contradicts it is mystifying.

Turnover in local faculties is so high that re-education for an innovation must be available continuously to new teachers coming into the school. Adequate arrangements for doing this locally are almost nonexistent. The only approximations are the orientation sessions for new teachers held before school opens in some districts, but these are brief and are intended to orient, not to re-educate.

In summary, successful dissemination depends upon realistic demonstrations followed by intensive, continuing re-education of a type seen almost nowhere today. There is no hope of accelerating the pace of instructional innovation in New York State until both can be provided. Happily, local school systems are willing to finance both steps for those new programs which have been evaluated and proven successful.

The Irreconcilable Distinctions

The hallmark of the ideal design setting is *freedom*; the hallmark of the ideal evaluation setting is *control*; the hallmark of the ideal demonstration setting is *normality*.

Design efforts cannot be conducted in evaluation settings because experimental controls of the type needed for an adequate evaluation are restrictive by their very nature. These restrictions reduce the freedom to explore for something better. Moreover, although it would be possible, it would be useless to evaluate a new program and prove it successful in artificial, enriched settings which most schools could never hope to reproduce. For both reasons, then, the circumstances needed for program design cannot be reconciled with the circumstances needed for proper evaluation.

The ordinary, unenriched setting needed for the demonstration of a proven innovation — so that the observer can see it as part of the normal, ongoing program in a school like his own — is the setting least likely to generate new designs. Because of this, a good design setting cannot be combined with a good demonstration setting.

It is obvious that evaluation must come before demonstration. Consequently no one would suggest that evaluation be conducted in a demonstration setting. But is it possible to *demonstrate an innovation to other schools while it is being evaluated* — just to stimulate interest, with no endorsement intended? Bringing in such outside observers would inject a stimulating new factor into the dynamics of the classroom situation. It could easily disrupt the controlled comparisons. Since it is not practical to attract interested observers into the normal control programs (because there would be nothing distinctive to observe) they should be kept out of the evaluation setting entirely. Thus evaluation cannot be conducted simultaneously with demonstration.

Reaching the Key Conclusion

It might be of interest to review the kind of evidence which led the Consultant to conclude that program design, evaluation, and dissemination are distinct, irreconcilable functions.

Soon after the survey interviews were begun, it began to appear that friction was common between people concerned with innovation. The reasons for the trouble did not become clear for some time. Then gradually, as interview followed interview, a pattern began to emerge.

The practitioner was not getting along with the research specialist. That theme was played out in tiny dramas where class-

room teachers complained, "The psychologist in my building wants to put everything under a microscope and measure it with numbers" and the psychologist complained "Teachers here don't care anything about objective evaluation." It was played out in a few giant arenas where superintendents said, "The men over at the college don't seem to understand that we need solid, practical answers" and the college people said, "We're still trying to get the school people around here to understand the value of research." Eventually it became clear that the practitioner wanted simply to improve his own program whereas the research specialist wanted to test the general value of an innovation.

Probably the most consistently abrasive relationship was that between the State men managing the Education Department's \$300,000 fund for local experimentation and the local men spending it. The State view was best summarized in these words: "It's like pulling teeth to get decent experimental designs from the schools." The local view was best summarized in these words: "The Department wants your grandmother's pedigree included in the research proposal."

The Consultant found himself agreeing heartily with the State that the localities should not expect support for slipshod research and agreeing heartily with the localities that the State should not try to pour their creative impulses into a rigid research framework, then realized that the State men were trying to evaluate programs the local men had not invented yet.

There was also conflict between men who urged the more rapid spread of new programs and said they were mystified by a phlegmatic response from practitioners — and the men who urged caution in approaching new programs and said they were distressed by the headlong adoption of unproven approaches by the schools. Although at first it seemed that they held polarized positions on the issue of *change as good* or *change as evil*, eventually it became evident that the first group wanted to accelerate dissemination while the second wanted to evaluate the innovations first. They were concentrating on two different but equally essential phases in the process of change.

Once the pattern became visible, additional evidence fell into place with remarkable neatness and the outlines became bolder.

A man who had been freed half time to develop a new program in his school said with pride that fifty visitors had come to

see it — but then admitted that demonstrating the program was keeping him from inventing it.

A creative teacher who had been working out a new approach for years in her spare time said she dreamed of spending just one or two years in a special school with small classes, plenty of materials, help for the teachers, and an alert staff so that she could perfect her new approach. She had described in one minute the ideal setting for new program *designs* — a task the Consultant labored over for months.

A school study council head sold routine test-scoring services to member schools in order to pay for a scoring machine, then bootlegged his own research projects through in the machine's spare time. He had given schools the *production control* services they would pay for and, in an instinctive recognition of where their interests lay, had not bothered them about financing his basic research — at least not directly.

A research specialist was surprised when a philanthropic foundation granted money for his proposal but suggested that his careful research design be eliminated lest he trip over it in future impulses to improve the program once it began operating. He had asked for money to evaluate a program he proposed to invent; the foundation gave him money to invent it, recognizing that evaluative controls would be a nuisance at that early stage.

A superintendent, when asked why he had sought a research grant for a program he had already decided would work, answered, "That's just to convince the neighbors." He was using money given for an evaluation to finance a demonstration.

This kind of evidence, and a great deal more like it, led to the conclusion that there are three phases in the process of changing instructional programs. It also led to the conclusion that most of the *people who work well in one phase do not work well in another* and often have an abrasive effect on each other when brought into close contact.

That conclusion was strengthened by a study of how change is managed in those fields of human endeavor which have made astonishingly rapid progress in improving their methods.

The Process of Change in Medicine, Agriculture and Industry

The distinctions between design, evaluation and dissemination are better recognized and the circumstances for each are better separated in medicine, agriculture and industry than in education.

People who work in the fields of agriculture, medicine, and industrial research and development are quick to point out the well-financed special circumstances and the provision of highly trained personnel which characterize the development process in those fields. The most striking feature of their innovative system is the existence of separate agencies for the different functions of designing, evaluating and disseminating new procedures.

The distinctions are perhaps clearest in agriculture, where it took 50 years of trial and error in the United States to discover the differences and get organized to deal with them. A brief look at that history is revealing. (Each major event mentioned below was preceded by successful state-sponsored pilot programs.)

In 1862, Federal legislation authorized the creation of *colleges of agriculture* as part of the land-grant institutions established under the Morrill Act. Twenty-five years later, with the passage of the Hatch Act in 1887, the Federal government began financing *agricultural experiment stations* to discover something definitive for the colleges of agriculture to teach. (Perhaps education has now reached this point.)

For the next 25 years, in addition to underpinning the college curricula, the experiment stations tried to disseminate research findings directly to farmers. Issuing research reports was soon abandoned because (and here the analogy with education becomes irresistible) research men wrote increasingly esoteric reports addressed primarily to each other. The stations then tried three-day institutes, traveling exhibits, bulletins, speeches, demonstrations at the stations — the same kind of techniques we use today in education. They failed for them as they have for us, and for many of the same reasons. As a consequence, the

Smith-Lever Act in 1914 created the *agricultural extension service* to solve the special problem of dissemination. The basic machinery of agricultural research and development — 52 years in the making — was then complete. Here is how it has worked ever since:

Drawing upon basic research in agriculture itself and in the scientific fields which underlie it, the staff of an agricultural experiment station is free, for example, to develop (to *invent*) a new strain of seed. The new seed is then tested on a wide variety of plots owned, leased or otherwise controlled by the experiment station. During this *evaluation* period, the circumstances surrounding the growth of the seed are controlled where possible and are observed and recorded where control is impossible, as with rainfall. At the conclusion of a successful field test, staff members of the experiment station describe the results in research reports. The *dissemination* process then begins. An extension specialist translates the research into a practical plan for using the new seed strain. The county agent is then responsible for promoting the use of the new seed. He frequently starts by persuading one farmer to demonstrate its use on his own farm so that neighboring farmers can be brought in to observe the results. For the farmers who want to change, the agent supplies the necessary knowledge and offers his continuing help.

Medicine and industrial development offer parallel examples.

The distinctions between design, evaluation and dissemination — and the provision of special circumstances for each — are the primary reasons for the speed with which other fields of human endeavor have improved their methods

It is easy to believe that medicine, agriculture and industry could never have progressed to their present levels if physicians, farmers and workers, occupied as they were with the everyday demands of their crafts, had been left to invent and to evaluate novel techniques or if better techniques had been left to spread largely by osmosis with occasional endorsement at meetings and

in journals. But all physicians, farmers and workers, were not left in ordinary circumstances. Able men were selected, carefully trained, and given the proper circumstances for the several different steps in the development process. Moreover, the recent history of those fields shows continuing attempts to discriminate even more exactly between basic research and each of the various innovative efforts which ultimately grow out of it. Clarifying these distinctions and taking care to finance each phase adequately seem to have been identified as the road to success. The functions are of course not entirely discrete, but whereas in other fields there is some overlapping, in education there is almost no distinction at all.

The analogy between education and other human enterprises is imperfect but similar enough in certain respects to be instructive

Schools cannot copy outright the improvement process used in other fields because of significant differences in our structures — and not for the reasons usually given.

Those of us in education tend to shrug off the lessons of medicine, agriculture and industry by saying that they deal with things, we with people; or that they can measure, we can not; or that they will gamble, we will not. The Consultant found through interviews that people in those fields do not want to gamble and that their reluctance to gamble is what led to the distinctions in the development process. He came to believe that those distinctions — *rather than the fact that other fields sometimes deal with things rather than with people* — is what led to their ability to measure.

In any field of human endeavor, a desire to measure arises from a reluctance to gamble. Education is no exception. Our best measurement has come not when the problems were simplest, but when we were so determined to reduce risks that we freed able men to solve the problems. The three best examples are our development of intelligence tests to estimate mental ability, reading tests to assess mastery of the basic learning tool, and the achievement tests of the College Entrance Examination

Board to predict college success. We cared enough to concentrate resources on getting a solution.

The fundamental lesson we can learn from medicine, agriculture and industry is to distinguish the three phases of innovation and to support each one adequately. Then we can go on to build a development process which is right for schools.

A Note About Basic Research in Education

Basic research in education is the study of the circumstances, processes and effects of human learning. The basic research effort may well be "useless" in the sense that it has no immediate application to *schools as educational institutions*. It does not matter whether the implications of basic research are too expensive, impractical, or otherwise unacceptable for operating school systems as we know them today. In fact, while the basic research is in progress, any concern for the applicability of the findings can distract the researcher, narrow his effort, and hasten him to unjustified conclusions. Ultimately, of course, basic research is extremely useful when it is converted into instructional procedures.

Our failure to recognize the value of basic research and our refusal to finance adequately the special circumstances needed for it — along with our natural but premature eagerness to have the researcher translate his results into educational programs — have prevented or damaged many basic research efforts. They have led some of our finest minds to try to convert their findings to practical use and to seek recognition through advertising them or to seek money for further research through selling their findings to schools. Such use of research talent, although understandable, is wasteful. Fundamental progress stops while these men go out into the marketplace. They should be supported to do what only they can do. We distract them to our loss.

It should be emphasized here that much of the basic research into human behavior which underlies — or rather *should* underlie — teaching programs is carried out by psychologists, sociologists and other social scientists. Unfortunately, much of it lies unnoticed by people who are specialists in the process of education.

In an early draft of this document the Consultant called basic research "Phase 1" in the innovative process and pointed out that it precedes invention or design, which it does in a logical sequence of events. Further consideration forced him to conclude that the logic of the sequence is seldom followed. Most innovation does not flow methodically from basic research findings but is undertaken quite independently.

Thus the Consultant bowed to the facts and violated logic, labelling program *design* "Phase 1" and setting basic research aside for treatment in this peripheral note. It is his opinion, however, that design efforts *should* draw upon basic research into human learning and that *the best designs will come from the conscious, deliberate, planned translation of that research into programs for teaching.*

Nevertheless, the plan recommended in Section II of this report does not provide for the support of basic research as a part of a *statewide* effort. This is because it is the belief of the Consultant that basic research should be supported by national funds, program design and program evaluation by state funds, and program dissemination by local funds.

Basic research should be financed through national funds because it produces the most universally useful information. "National" need not mean from the Federal government. Foundation grants, industrial gifts, and alumni funds are also national in the sense that they usually have no state identification.

The most liberal support of basic research in education traditionally has been in the form of the time and work contributed by the underpaid graduate faculties at the universities, most of which are essentially national in character. This situation has been changed somewhat in recent years by research funds available under the National Defense Education Act and is being modified further by the growing Cooperative Research Program of the U. S. Office of Education, a grant program which supports basic research with national funds.

An argument can be made for *state support of basic research*, at least as a stopgap measure until national funds become available. However, an equally strong argument can be made for *national support of program design*, at least as a stopgap arrangement until state funds become available. (The National Science Foundation has already begun to do the latter.)

A more sensible approach would seem to be (1) for the states to stimulate national action in support of basic research and (2) for the Federal government to stimulate state action in support of program design and program evaluation through field testing. The plan outlined in Section II assumes that the more sensible approach will ultimately prevail.



THE SOLUTION . . . Organizing to Improve
The Process of Educational Change



The solution must be as great as the problem. A little more of anything — even a little more of everything we are already doing — would not be enough. A new Bureau in the State Education Department, a group of summer workshops at the colleges, a spate of conferences sponsored by the professional associations, a series of committees generated by the school study councils — none of these would be of significance. What is needed is a solution in which the elements correspond to the elements of the problem.

The plan recommended here is based squarely on the findings presented earlier and it depends upon those findings for its justification. It assumes that the factors influencing instructional innovation cannot be altered appreciably and that they must be guided — not opposed. It assumes that the solution must be accomplished largely with the people and the funds already available. Consequently it is conservative in that it calls for some rearrangement of the forces already at work on the schools.

The plan expects each level of government and each type of organization to perform and to finance the functions most natural to that structure. It avoids the creation of new structures where adequate ones exist, but it recommends the abandonment of existing structures which are inherently defective.

The plan is presented in outline form, deliberately to avoid argument over details, and with the expectation that further study by the profession will result in improvement over what the Consultant could recommend at this time. The heart of the plan is the creation of separate circumstances for the design, evaluation, and dissemination of new instructional programs. That feature should be retained in any modification of the recommended structure.

Program Design and Program Evaluation*

A Coordinated Statewide Effort

The Regents of the University of the State of New York should create a semi-autonomous Education Research Agency to stimulate and to finance the design and rigorous evaluation of new instructional programs for elementary and secondary schools.

The Agency should use State funds to create deliberately in field locations all across the State the enriched settings needed for the design of new instructional programs. The inventors should not be Agency staff members but rather school and college people hired temporarily, brought together and freed to design a program.

After a program has been designed, the Agency should put it through an elaborate statewide field test to find what it will accomplish. Here again the evaluators should not be Agency staff members but school and college people hired temporarily to do the job.

When the field test has been completed, the Agency should urge the dissemination of the program through regional School Development Units which should be created for that purpose.

Recommendations

General Operation of the Education Research Agency

The Education Research Agency should be an adjunct of the State Education Department. Its chief administrator should be responsible directly to the Commissioner of Education.

The Agency staff should be kept small and its work should be exclusively administrative. The program design and program evaluation functions of the Agency should not be performed by its own staff.

* The plan is shown in graphic form on pages 54-55.

The Agency budget should be divided into three distinct categories: (1) Administration, (2) Program Design, (3) Program Evaluation. Transfer of funds between the three categories should be prohibited. Regular employees of the Agency should be paid only from the Administration category.

All costs of designing and evaluating new programs should be borne by the Agency, except that cooperating institutions should be reimbursed only for the additional costs they incur through participating, plus a standard allowance for overhead.

The Agency should be empowered to suspend, subject only to veto by the Commissioner or the Regents, any Regulations of the Commissioner and any rules and directives of the State Education Department which govern elementary and secondary schools, including those concerning the use of Regents Examinations but excepting those relating directly to the health and safety of pupils. The power to suspend should be exercised generously in those special circumstances which the Agency creates and finances for the design of new programs. The power should be exercised as necessary in those circumstances which the Agency creates and finances for the evaluation of new programs through field testing.

Designing New Programs

In various temporary field locations across the State, the Agency should create special circumstances conducive to the design of new instructional approaches.

The staff of the Agency should be in no way connected with the selection of problems to be solved through new designs. Problems should be selected by a highly capable Professional Advisory Committee with a rotating membership chosen from elementary and secondary schools, colleges and universities, and the group of individuals who are members of the State Education Department. The Committee should screen problems suggested to it from anywhere in the State.

When a problem has been selected, an Exploratory Panel with members from New York State and elsewhere should be formed to suggest one or more promising design possibilities and to help identify people in the State or elsewhere for the Design Groups. The Exploratory Panel need meet only a few days.

The Agency should then announce the various explorations to be undertaken and should receive applications from New York State institutions and organizations — or clusters of institutions and organizations — which propose to explore in those directions. Applications should be approved on the advice of the Exploratory Panel and the Agency should guarantee continuous financing throughout the design phase, which will extend from perhaps one to five years. Free communication between the Design Groups working on the same problem should be encouraged by the Agency.

Typically, each temporary Design Group should have a full-time staff consisting of:

- 1) Creative teachers from elementary and secondary schools
- 2) College and university personnel who are expert in the process of education
- 3) College and university personnel who are expert in fields other than education
- 4) Members of the State Education Department (selected *not to represent the Department* but because of their own individual professional qualifications)

Each Design Group should be paid to concentrate full-time on developing a new program and should be given the working conditions described earlier as conducive to imaginative design efforts. Those conditions should always include the opportunity to work directly and at length with school children.

No attempt whatsoever should be made by the Agency to test the effectiveness of the new program while it is being designed. Persons interested chiefly in the thorough evaluation of instructional approaches should not be placed in a Design Group. Any member who proposes evaluation of the program through comparative testing during the design stage should be removed at the request of the Group.

When a Design Group has developed a new instructional approach, it should describe for the Education Research Agency what the Group believes the approach will accomplish for which students under specified conditions. The Group should then be dissolved and its members should return to their regular full-time positions.

Evaluating New Programs

Once a new teaching program has been designed and the designers have described its expected results and have developed specific instructions for its use, the Agency should sponsor and finance its evaluation through extensive field testing.

Once again, the determination as to which programs are ready for testing should be the function of the Professional Advisory Committee described earlier and not a responsibility of the Agency staff.

Additional new approaches have been and always will be designed outside the sponsorship of the Education Research Agency. They should be as eligible for field testing in the State as any developed under Agency sponsorship. Some programs already in existence are now ready for evaluation: PSSC physics, SMSG mathematics, Advanced Placement courses, and others. Testing of current programs (including those produced commercially) should be undertaken as soon as the Agency is created, even before Agency-sponsored design settings have time to produce results.

For each program selected, the Agency should employ from schools, colleges and the State Education Department a temporary Evaluation Group to lay out and to supervise an extensive statewide field test. The Evaluation Group should identify and use any existing evaluation instruments particularly suited to the program being tested, but it must of necessity be as imaginative in inventing evaluative techniques as the designers were in inventing the program.

The program should be employed over the full range of conditions thought to influence human learning and should be used with all types of students for whom it might reasonably be appropriate. As many as twenty or thirty different school settings should be used in a single test. The process may occasionally be concluded within one or two years, but will usually take longer because longitudinal studies will often be required.

If comparison studies are made, using experimental and control settings, it is absolutely essential that equal money, attention, and encouragement be supplied to both the control and the experimental settings. It is vital that each group of teachers and

students involved in the comparison be inspired to compete and to win, using of course only the techniques assigned to them.

Upon the completion of a field test, the Evaluation Group should describe precisely what the new program accomplished and under exactly what conditions. The Group should then be disbanded and its members released to take up their normal responsibilities.

If the new program proved to be superior to others, the Agency should endorse and recommend its use in the schools under identical conditions for identical purposes.

Recommended programs should be described in detail by the Agency and their dissemination should be begun immediately by the regional School Development Councils.



Program Dissemination*

A Coordinated Regional Effort

The Regents of the University of the State of New York should stimulate and subsidize the formation of regional School Development Units to disseminate the programs proven and endorsed by the Education Research Agency.

The School Development Units should be financed by approximately one per cent of the current operating budget of each component school district and should be administered and controlled by their member schools. Membership in a School Development Unit should be compulsory for every school district.

The Units should have three functions: (1) to demonstrate the programs proven and endorsed by the Education Research Agency, (2) to teach teachers in the component districts how to carry out the new programs, and (3) to arrange for nearby colleges and universities to teach the necessary skills on a continuing basis.

New programs should be demonstrated not by the staff of the Regional School Development Unit but by regular teachers in regular schools.

The necessary new skills should be taught not by the staff of the Development Unit but by talented school and college people hired temporarily for that purpose.

Recommendations

General Operation of the School Development Units

Each School Development Unit should consist of a limited number of member school systems — probably ten to twenty depending upon their size — except that each of the largest

* The plan is shown in graphic form on pages 54-55.

cities should incorporate one or more Development Units *within its own boundaries*. (New York City, for example, should contain approximately twenty-five such Units.)

Membership in a Development Unit, or internal subdivision of the largest cities into several Units, should be made mandatory for every school district in the State. Each Unit should be supported by approximately one per cent of the current operating budget of each component school district.

The chief administrative officer of each regional Unit should be appointed by and responsible to a lay board composed of representatives from the boards of education of the component school districts. He should serve in a contractual relationship to his board and should not have tenure rights. The chief administrative officer in a city Unit should be responsible to the city superintendent.

Like the Education Research Agency, each regional School Development Unit should have a small permanent staff engaging exclusively in administrative work.

The Unit budget should be divided into two categories: (1) Administration and (2) Demonstration and Teaching. Transfer of funds between the two categories should be prohibited. Regular employees of the Unit should be paid only from the Administration category.

The State Education Department should plan a network of School Development Units encompassing every school district in the State as a guide to their formation. Existing organizations, such as Boards of Cooperative Services, should be considered as possible locations. However, no effort should be made to convert into the new form the nine school study councils now sponsored by individual colleges and universities. Those councils should be allowed to atrophy in favor of the locally-sponsored School Development Units.

Disseminating New Programs

The School Development Units should have three functions:

- 1) To demonstrate programs proven and endorsed by the central Education Research Agency
- 2) To develop in teachers in the component districts the professional skills needed to carry out those programs

- 3) To transfer this professional development function to nearby colleges and universities as rapidly as possible

(1) Demonstrating new programs

The School Development Units should arrange for the demonstration of each new program throughout their regions with all the types of students and in all the types of school settings for which the program has proven effective.

All demonstrations should consist of the continuing use of the new approach as a basic part of regular instruction in a normal school setting. That is, the demonstration should not be a special performance by extraordinary teachers working under artificial conditions for a limited time, but instead *a natural segment of a regular school*.

School administrators and teachers from other schools should be urged to visit demonstrations of the new programs in nearby schools like their own. If their school is unique in their region, the Development Unit should arrange visits to similar schools in other regions. Visitors should be given an opportunity to talk informally with teachers and students engaged in the new instruction.

The extra costs to local schools of welcoming and caring for visitors should be borne by the Development Units. However, since all demonstrations must be *integral segments of normal school operation*, under no circumstances should the Development Units subsidize in any way whatsoever the actual managing, equipping or staffing of the new program.

(2) Teaching teachers to carry out new programs

Each individual member school system in the Development Unit should decide for itself whether it wishes to take on a recommended new program.

For those schools which decide favorably, the Development Unit should employ from colleges and schools a temporary Development Group to teach the new approach to *all* the teachers for whom it would be appropriate. For example, all the modern language teachers in those schools adopting an innovation would

be taught the superior new approach to language instruction. The development of a new professional skill throughout a region should be largely completed within three years.

The developing of advanced professional skills for teachers should embody these features:

- a) All teachers affected in one school should learn the new approach at the same time.
- b) The development effort should be substantial and in depth. If the new program requires teachers to study new substantive content as well as new methods, they should learn *more* substantive content that the new programs require them to teach.
- c) The development effort should be of a type suitable for experienced personnel. Formal classroom instruction, if used at all, should be supplemented by *authentic workshops* and by direct teaching experiences in which the teacher works with his own students over a period of weeks or months and has expert advice available on request.
- d) All equipment and materials needed by teachers and by their students should be studied and used during the development experience.
- e) A school taking on the new program should acquire the needed equipment and materials and should create the required working conditions for its teachers.

(3) *Transferring development activities to the colleges and universities*

As soon as a Development Unit has accomplished the general dissemination of a given new program to interested schools throughout its geographic area, the Development Group for that particular program should be disbanded to return to campus and classroom.

Before dissolving the Group, however, the Development Unit should arrange for colleges and universities in the region to absorb continuing development activities into their in-service and/or graduate offerings. From that point forward, college courses and college services should provide for:

- a) Individual teachers who missed the development in its first general diffusion.
- b) Newcomers to the area
- c) School staffs which decide late to take on the development
- d) Schools which want outside personnel to supply continuing attention to a program already initiated.

part of an overall plan of educational change. Improving the direction of educational change. The work of the State Education Department, the colleges and universities, the lay and professional associations, the philanthropic foundations, and the community organizations should be coordinated with the work of the State Education Research Agency and the Regional School Development Unit. Some other existing organizations are performing operations which could be better performed under an unified management.

The position of field supervisor in the State Education Department, the campus schools at the State University College, and the college-affiliated school study centers should be replaced with more effective structure.

Recommendations

The State Education Department should permit the State to sponsor experiments in education. Experimentation in the field is essential for the development of new educational ideas. Groups of persons, especially those with promising new developments, should be encouraged to the extent of resources. This opportunity should be of value to the State.

After suspending department regulations temporarily in selected field locations during the design and evaluation phases, the Education Research Agency should reinstate them at the conclusion of a statewide field test. At that point, the various

Related Roles of Existing Organizations

A number of existing organizations in New York State are now performing operations which would be of far more significance to the schools if they were part of an overall plan for accelerating the pace and improving the direction of educational change.

The work of the State Education Department, the colleges and universities, the lay and professional associations, the philanthropic foundations, and the commercial organizations should be coordinated with the work of the State Education Research Agency and the regional School Development Units.

Some other existing organizations are performing operations which could be better performed under an entirely new arrangement.

The position of Field Supervisor in the State Education Department, the campus schools at the State University Colleges, and the college-affiliated school study councils should be replaced with more effective structures.

Recommendations

The State Education Department

The creation of the Education Research Agency will permit the State to sponsor experimentation with approaches not officially endorsed by the various divisions of the State Education Department. Members of the Department will be eligible for membership in the temporary Design Groups and Evaluation Groups and thus can be personally associated with promising new developments *without committing their Bureaus to the endorsement of unproven approaches*. This opportunity should be of value to the Department Staff.

After suspending Department regulations temporarily in selected field locations during the *design* and *evaluation* phases, the Education Research Agency should reinstate them at the conclusion of a statewide field test. At that point, the various

divisions of the Department should permanently amend their regulations as necessary to allow the immediate dissemination of a proven innovation.

The various special funds now used by the Department to promote innovation should all be re-examined and shifted into their proper relationship with the overall plan outlined here. Money intended to stimulate the invention of new programs should be transferred to the Education Research Agency and spent on Design Groups. Money intended to evaluate new programs should be transferred to the Agency and spent on Evaluation Groups. Money intended to teach teachers how to use better approaches should be used to subsidize the creation of School Development Units which can undertake the in-service education of teachers using Development Groups. Among the funds which should be re-examined are those now used to finance local experimental programs, the use of television, in-service courses for teachers, and plans for the culturally deprived. There are others also.

In the past it has been necessary for the Department to request a variety of special funds from the Legislature to finance this or that school improvement project and to insulate those funds from normal Department operation. The distinction between the three separate innovative functions and the creation of the central Agency and the regional Development Units should make such special funds unnecessary in the future. Or at least it should clarify their functions and give them a home.

Two existing components of the State Education Department should be shifted into an effective working relationship with the pattern outlined here. These are (1) the Quality Measurement Project staff and (2) the Field Supervisors.

(1) Quality Measurement Project

The Project staff should continue research to ascertain what circumstances affect learning in school—what characteristics of the student, the teacher, the school, the home, or the community.

The Project staff should devise instruments and procedures for measuring these circumstances and for constructing a School-Community Characteristics Profile on any local school or school system in the State to show what determinants of learning exist in that school or school system.

A local Profile should be submitted:

- a) to the Education Research Agency by any school proposing to become part of a program design activity,
- b) to the Evaluation Group by any school proposing to become part of a statewide field test, or
- c) to the School Development Unit by any school proposing to become a demonstration location or wishing to visit a demonstration in a school comparable to its own.

(2) The Field Supervisors

The Field Supervisors in the elementary, secondary, vocational and curriculum divisions of the Department have two functions: (a) inspection of schools and (b) communication between schools and the Department and among the schools themselves.

Both the inspection and communication functions (including enforcing Department regulations and recommending modifications in them) should be performed not by Field Supervisors but by Professional Visiting Committees composed of school and college personnel in each region drawn together temporarily for that purpose. The Committees should maintain close communication with the Department.

Except in such specialties as Vocational Agriculture, where instructional programs are widely scattered across the State and where there are apparently enough central supervisors to serve them effectively, all State Department Field Supervisors should be transferred to regional School Development Units, relieved of the obligation to specialize, and elevated to general administrative positions as Coordinators of Professional Visiting. There they should administer the work of the Professional Visiting Committees in their regions.

The professional associations of the State should identify and nominate highly qualified members for the Professional Visiting Committees. The associations should provide training programs for those selected in order to help them become skilled Professional Visitors in their specialties.

Regional Visiting Committees should include members from outside the immediate region. Committee membership should be rotated so that no Professional Visitor need leave his own school or college work for more than a few days in any one year.

The costs of this program should be distributed approximately as follows:

- a) Coordinators of Professional Visiting should be paid by the School Development Unit.
- b) Costs of training the Visitors should be paid by the professional associations.
- c) Travel expenses of Visitors should be paid by the School Development Unit.
- d) Salaries of Visitors and salaries of substitute teachers employed locally while Visitors are away should be paid by individual school systems.

The Colleges and Universities

The plan requires the active, continuing participation of college and university personnel. It cannot succeed without them.

College faculty members in all schools and departments, not in schools and departments of education alone, will participate as appropriate in Design Groups, in Evaluation Groups and in Development Groups. The elementary and secondary schools of the State thus will have totally new opportunities to employ the talents of professors in improving local programs. Relationships should be strengthened and mutual understanding increased.

Money for paying college personnel will come from the State and the localities — the former in the design and evaluation phases and the latter in the development phase — and there will be no burden on already strained college funds. Moreover, the colleges can continue to behave like colleges: they will not be expected to modify their established institutional patterns.

The participation of professors at the *design* stage will mean (1) that men conversant with basic research can bring its findings to bear on innovations and (2) that experts in the content of education and experts in the process of education can join with experienced teachers of children to devise improved educational programs.

The participation of professors at the *evaluation* stage will mean that the men inside and outside the specialty of education who have the deepest interest in measurement will be paid and freed to sharpen the evaluative instruments used by schools.

The participation of professors at the *dissemination* stage will mean that they can learn — by teaching it — the best new content and the best new instructional procedures used in elementary and secondary schools.

As indicated earlier, after a regional School Development Unit has largely completed the re-education of interested teachers in a new instructional approach, it will arrange with nearby colleges to provide continuing education in the new content and skills. The colleges can offer this education in the form most natural to them: regular courses of predetermined content and predetermined length open to individuals who elect to come to the campuses. (At that point the teachers seeking the education will be individuals who were missed in the broad development effort of the regional Unit or who are seeking refresher work.)

Finally, once a regional Development Unit has concluded an effort and disbanded a Development Group, the colleges will have the conditions they need to teach a new approach in *pre-service* courses. Those conditions are: (1) the knowledge that the approach has been proven through extensive field testing, (2) the presence on campus of professors who know how to teach it — having learned how as members of a regional Development Group and 3) the general use of the innovation in the schools which surround their campuses. Under those conditions, the colleges will almost inevitably incorporate the approach in their pre-service teacher-education courses.

The Campus Schools at the State University Colleges

The eleven campus schools at the State University Colleges should be closed and their elementary and secondary school students returned to the local public school systems.

For reasons indicated in the earlier discussion of the campus schools, they cannot design new instructional approaches, will not put their programs through intensive evaluation, and cannot serve as models to the public schools around them. The one function which they can and do perform is the one function which they *need not perform* because it is done elsewhere at no special expense to the State: they demonstrate conventional programs of proven quality.

There is only one reason for doing this on the college campus: *accessibility*. The Consultant believes that in a day when automobiles, buses, and television abound, the argument of accessibility is not a sufficient justification for maintaining campus schools. Furthermore, we have a clear choice between readily accessible artificiality in the campus schools and less accessible reality in the public schools. The correct choice for a teacher-education program is obvious.

If candidates for the profession of teaching are to observe conventional programs of established quality, they should see them in ordinary public schools. If they are to observe proven innovations, they should see them in the demonstration settings sponsored by the regional School Development Units in ordinary public schools. And of course the candidates should receive their practice teaching experience (as virtually all of them do today) in ordinary public schools.

As they move to establish new working relationships with the public schools to fill the gap left by the closing of the campus schools, the faculties of education in the State University Colleges will in all probability pioneer valuable new approaches to teacher education.

The Associations

The New York State Teachers Association

The New York State Teachers Association, as well as the State chapters of national professional associations, should be urged by the Education Research Agency and by the School Development Units to parallel all design, evaluation and dissemination efforts with energetic communication about those efforts. Associations of teachers and administrators should be given the information and assistance they need to design their meetings and publications around

- 1) those problems to which imaginative new design efforts are being applied,
- 2) those new programs which are currently undergoing extensive field testing, and
- 3) in particular, those proven programs which have been endorsed by the Education Research Agency and are being disseminated through the School Development Units.

In short, the central Agency and the regional Units should provide the associations with a much-needed focus for their communication activities, while the associations provide the Agency and the Units with much-needed communication about their school development activities.

(The key role of the associations in determining the composition of the Professional Visiting Committees was described earlier.)

The New York State School Boards Association

The School Boards Association should be encouraged and helped to inform its member school boards extensively and in depth about the proposed purpose, structure and operation of the State school improvement system. Once the system is operating, the Association should be encouraged to interpret its design, evaluation, and dissemination efforts to school board members at statewide and regional meetings.

Close working relationships should be maintained by the central Agency with Association headquarters and by the regional School Development Units with the Association's area subdivisions. Association endorsement of the several phases of the program should be sought as a means of eliciting the cooperation of local school boards.

All efforts to communicate information about new programs to professional personnel should be matched at every step by efforts to communicate information about them to school board members.

The New York State Congress of Parents and Teachers

The local parent-teacher association in most schools should be regarded as the prime organization for creating parent understanding and readiness to support the introduction of new instructional programs into those schools.

The Education Research Agency working with State leaders, the School Development Unit working with regional leaders, and the local school staff working with local leaders should provide direction and aid to the P.T.A. Its cooperation should be avidly sought in creating the local climates essential (1) to imaginative design efforts in community pilot settings, (2) to

field testing under closely controlled conditions in local schools, and (3) to the rapid spread of distinctive instructional approaches which may break sharply with community traditions.

The New York State Citizens Committee for the Public Schools

The State Citizens Committee should be encouraged by the Education Research Agency to determine which patterns of total community participation are most effective in building public understanding and acceptance of new instructional programs in various types of communities. The Committee should be urged and aided to describe successful patterns, to recommend them to local citizens groups across the State, and to provide help to community groups on request.

The patterns recommended to local committees should suggest appropriate working relationships with the Education Research Agency and more particularly with the regional School Development Units, local school boards and local school administrators.

The College-Affiliated School Study Councils

The nine regional college-affiliated school study councils should be allowed to atrophy in favor of the regional School Development Units. No attempt should be made to convert the study councils into Development Units.

The Units should be under the full control of local school systems in order to guarantee their concentration on the *development* function. This arrangement will interest local schools in financing them well enough to provide services the underfinanced study councils have never been able to provide — services in the form of rapid professional development of the total local staff in its ability to handle better instructional approaches.

Moreover, the Units should draw freely on the resources of many colleges and universities rather than depending heavily upon a single source. College-affiliated councils almost inevitably favor their sponsoring institutions.

Finally, the limited membership of a Development Unit (10 to 20 school systems) should lessen its appeal to a sponsoring

college, which might have more to gain from shallower contact with a far larger number of school systems.

The adoption of the plan recommended here will mean that college personnel (not only in schools and departments of education but in other schools and departments as well) can be paid with fresh new funds from the State and from local schools. These funds should more than offset any loss the college sustains through the closing of its study council.

It may be that the study councils will develop new functions and will continue to attract member schools for purposes not encompassed in the plan outlined here. This could be a clear gain to the schools of the State.

The Private Philanthropic Foundations

The philanthropic foundations which have supported basic research in the social sciences underlying education — psychology, sociology, political science, and others — can continue to do so with the expectation that New York State will draw more effectively upon the results of that research in designing new instructional approaches.

The foundations which have supported the *actual design of new programs* should be encouraged, at least in New York State, to invest their money *exclusively in financing design efforts* and should be encouraged to leave dissemination to the schools and colleges of the State after the designs have been evaluated. As indicated previously, it is difficult for a private foundation to disseminate the designs which it has sponsored, because of professional suspicion about the motives of the foundation in promoting specific programs. This suspicion can be alleviated effectively once a program has been evaluated by an independent statewide group and is being disseminated by locally-controlled School Development Units.

Foundation financing of new design efforts can be arranged either through the Educational Research Agency or independently of it.

The Commercial Organizations

The commercial organizations are already extremely powerful and will remain so. To connect their power to the major

effort outlined here, they should be invited to participate in each of the three phases of educational change.

Design

When the Education Research Agency announces plans to select Design Groups, the schools and colleges submitting proposals should include plans to use commercial organizations when appropriate to help the Design Groups develop new materials and equipment.

The commercial organizations should bid for the privilege of assisting Design Groups, with their bids expressed in terms of the technical personnel, materials and equipment they can supply. It should not be necessary to pay them to take part. They normally invest a certain amount in the development of new products; the chance to spend that money in conjunction with a highly selected professional Design Group should be attractive. Different companies should work with different Design Groups to attack the same problem simultaneously.

Evaluation

When a new instructional program is ready for statewide field testing, the cooperating commercial organization should supply — at no charge — sufficient quantities of necessary equipment or materials for statewide use during the field test period. This might represent a sizeable investment for the company, but the returns could be great. Agency endorsement of the product for use in a large number of schools under rigorous test conditions would have great advertising value; the field test would reveal what modifications would make the product more attractive to schools; a successful outcome would give the participating company a competitive advantage difficult for other companies to overcome.

Dissemination

When a program has proven successful through field testing, there are at least two possibilities for the participation of commercial organizations: (1) Specifications for the new material can be made available to anyone interested in producing it; (2) Bids can be taken on the exclusive right to produce the

material. The first approach is now being used with the SMSG mathematics and the BSCS biology curriculum materials. The second is being used with the Glastonbury language materials developed under NDEA sponsorship.

An organization which supplies materials during a field test must not be deprived of competitive advantage during the dissemination phase by having exclusive rights granted to some other producer. This can be handled by permitting the original company to produce the successful materials either on an exclusive basis or else in competition with another company finally selected for full production.



Our present desire is moving into a
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quite organizations and arrangements
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If we can recognize them as being the
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are worth, and then move on to
something better. New York State can
achieve a long-established leadership
in education.

Conclusion

Our greatest barrier in moving into a new plan for improving New York State education will be our loyalty to the inadequate organizations and arrangements which exist today.

If we can recognize them as being the best we could imagine when we invented them, give them full credit for what they have accomplished, and then move on to something better, New York State can maintain its long-established leadership in education.

Appendix

Institutions, Organizations, Associations and Individuals Visited

School Systems in New York State

Amherst	Hempstead	Madrid-Waddington	Suffern
Attica	Hicksville	Mount Kisco	Syracuse
Brighton	Hornell	North Syracuse	Tarrytown
Broadalbin	Hudson	Ossining	Tuckahoe
Buffalo	Jamestown	Plattsburgh	Warsaw
Canton	Johnstown	Red Hook	Yonkers
Glens Falls	Lackawanna	Rhinebeck	
Harrison	Long Beach	Snyder	

New York City

Superintendent of Schools
Deputy Superintendent, Research and Evaluation
Associate Superintendent, Elementary School Division
Associate Superintendent, Junior High School Division
Associate Superintendent, High School Division
Director of Curriculum Research
Director of Educational Research
Selected school principals

School Systems Outside New York State

Fort Lauderdale, Florida	Norwalk, Connecticut
Lakewood, Ohio	Pittsburgh, Pennsylvania
Shaker Heights, Ohio	

Boards of Cooperative Educational Services in New York State

Dutchess County, Red Hook
Suffolk County, Supervisory District No. 3, Huntington
Westchester County, Supervisory District No. 1, Bedford Hills
Westchester County, Supervisory District No. 2, Valhalla
Wyoming County, Attica

Institutions of Higher Education

Colleges and Schools of Education

Colgate University, Department of Education
Columbia University — Teachers College
Cornell University — School of Education
D'Youville College, Department of Education
Elmira College, Division of Applied Arts and Science, Teacher
Education
Fordham University — School of Education
New York City, Board of Higher Education
Acting President, City College
Acting Dean, Division of Teacher Education
New York University — School of Education
State University College at Albany
State University College at Oneonta
State University College at Potsdam
Syracuse University — School of Education
University of Buffalo — School of Education
University of Rochester — School of Education

University of Alberta Faculty of Education
Edmonton, Alberta, Canada

Colleges and Schools of Medicine

Cornell University — Medical College
State University College of Medicine, Syracuse
University of Rochester — School of Medicine and Dentistry

New York State Education Department

Commissioner of Education
Deputy Commissioner of Education
Associate Commissioner for Elementary, Secondary and Adult
Education
Associate Commissioner for Higher and Professional Education
Associate Commissioner for Cultural Education and Special
Services
Executive Assistant to the Commissioner
Assistant Commissioner for Research and Special Studies
Assistant Commissioner for Higher Education

Assistant Commissioner for Instructional Services (General Education)
 Assistant Commissioner for Instructional Services (Vocational Education)
 Assistant Commissioner for Pupil Personnel Services and Adult Education
 Assistant Commissioner for School Finance and Administrative Services
 Consultant in Educational Communications
 Director of Division of Educational Testing
 Director of Division of Elementary Education
 Director of Division of Pupil Personnel Services
 Chief of Bureau of Agricultural Education
 Consultant in Classroom Communications
 Chief of Bureau of Educational Finance Research
 Chief of Bureau of Elementary Curriculum Development
 Chief of Bureau of Elementary School Supervision
 Chief of Bureau of Secondary Curriculum Development
 Chief of Bureau of Secondary School Supervision
 Chief of Bureau of Statistical Services
 Chief of Bureau of Teacher Education and Certification
 Statistician in Research
 Associate in Education Research

School Study Councils

Capital Area School Development Association
 State University College of Education, Albany
 Catskill Area Project in Small School Design
 State University College of Education, Oneonta
 Central New York School Study Council
 Syracuse University
 Central School Boards Committee for Educational Research
 Teachers College, Columbia University
 Colgate University School Study Council
 Department of Education, Colgate University
 Genesee Valley School Study Council
 University of Rochester
 Metropolitan School Study Council
 Teachers College, Columbia University
 Mid-Hudson School Study Council
 State University College of Education, New Paltz
 The North Country Administrators Council
 State University College of Education, Potsdam

Southern-Tier School Study Council
Alfred University
State University College of Education, Plattsburgh
Western New York School Study Council
School of Education, University of Buffalo

Educational Research Council of Greater Cleveland
Cleveland, Ohio

Associations and Agencies

New York State Teachers Association, Albany
New York State School Boards Association, Albany
New York State Citizens Committee for the Public Schools, Inc.,
New York
New York State Congress of Parents and Teachers, Inc., Albany
Cooperative Research Program, Office of Education, U. S. Department of Health, Education and Welfare, Washington, D.C.

Conferences and Conventions

American Association of School Administrators — 1961: Philadelphia, Pennsylvania
New York State Association of Supervision and Curriculum Development — 1961: Lake Placid
Interstate Teacher Education Conference — 1961: City College, New York
Nassau County Curriculum Directors — 1961: Rockville Centre

Individual Interviews

Staff Associate, Committee on Staff Utilization of the National Association of Secondary School Principals, Washington, D.C.
Executive Secretary, Council of Chief State School Officers, Washington, D.C.
President, Educational Facilities Laboratories, Inc., New York
Director, Experimental Teaching Center, New York University, New York
Associate Program Director and Treasurer, the Fund for the Advancement of Education, the Ford Foundation, New York

Editor-in-chief of the School Department, Harcourt, Brace & World, Inc., New York
Principal, Hunter College High School, New York; formerly Consultant on Education of the Gifted, New York State Education Department
Associate Program Director, Course Content Improvement Section, National Science Foundation, Washington, D.C.
Vice-President, Teleprompter Corporation, New York
Assistant Administrator, Federal Extension Service, U. S. Department of Agriculture, Washington, D.C.
Associate Dean of the Graduate School of Education, Yeshiva University, New York; formerly Consultant on Education of the Gifted, New York State Education Department







THE UNIVERSITY OF
THE STATE OF NEW YORK
STATE EDUCATION
DEPARTMENT, ALBANY